JULY 29, 2019

TIME

THE NEXT SPACE RACE

BY JEFFREY KLUGER

TIME

EXPERIENCE THE APOLLO 11 LUNAR LANDING THROUGH THE TIME IMMERSIVE APP

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Details inside

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HISTORY COMES ALIVE

To mark the 50th anniversary of the Apollo 11 moon landing, TIME has partnered with John Knoll and the Smithsonian's National Air and Space Museum to create a groundbreaking augmented reality experience of this historic event, available in the new TIME Immersive app for iOS and Android.

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QUALITY SAUSAGE SINCE 1969

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Photograph by Christopher Payne for TIME

ON THE COVER: *Illustration by Alessandro Gottardo for TIME*

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Moon shots

ONE DECEMBER DAY IN 1968, IN BALTIMORE, 14-year-old Jeffrey Kluger came home from school to find a copy of TIME with the headline RACE FOR THE MOON on its cover. Today, Jeff credits that experience with launching him as one of the world's premier space journalists, a career in which he has documented the race to the moon and beyond in hundreds of stories for TIME, including this week's cover story, and in 10 books, one of which became the Tom Hanks movie *Apollo 13*. "I remember laying that week's issue of TIME out on my bed and kneeling in front of it to read the article," he says. "I came away thinking, This is it. We're going to the moon."

There is probably no subject that better reflects TIME's own journey than the story of space. TIME launched into the topic with a 1952 cover featuring a space robot. Today, we are building on that legacy through new formats that tell the story in new ways. A 2014 TIME cover story about astronaut Scott Kelly became our Emmy-winning PBS documentary, *A Year in Space*. Last year, working with NASA and Felix & Paul Studios, we launched the first professional virtual-reality camera to the International Space Station for a multimedia project that will become *Space Explorers: The ISS Experience*.

With this week's issue, we're also launching our TIME Immersive app, with a project—led by TIME's Mia Tramz and Tomi Omololu-Lange—that lets you experience the 1969 moon landing in 3-D augmented reality in your own home, classroom or office. For more information, visit **time.com/apollo11**

I can't help but imagine another 14-year-old curling up with her phone this week and thinking, "This is it. We're going to the moon."

Edward Felsenthal,
EDITOR-IN-CHIEF & CEO
@EFELSENTHAL

Blast from the past

This week's cover illustration of the new space race is a homage to the Dec. 6, 1968, cover. Published shortly before the success of Apollo 8 made U.S. astronauts first to orbit the moon, that issue marked a pivotal moment for space exploration. Read the story—and the rest of TIME's coverage of space now and then—at **time.com/vault**

1952
Cold War rocket science

1969
First humans walk on moon

1981
First space shuttle launch

2014
Scott Kelly's year in space

AUGMENTED REALITY
Landing on the Moon is the first project available in TIME Immersive, a new augmented-reality and virtual-reality app available on iOS and Android devices. Download it for free, and hold groundbreaking visual journalism in your hands.

▸ *For more visit*
time.com/immersive

SETTING THE RECORD STRAIGHT ▸ In "Uncertain Justice" (July 22), we mischaracterized a 2019 Supreme Court decision on partisan gerrymandering, which found it is a political question beyond the reach of federal court.

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For the Record

‘I dread getting back into a plane.’

PAUL NJOROGE,
whose wife, three children and mother-in-law were among the passengers who died in the March 10 crash of a Boeing 737 Max in Ethiopia, in an Associated Press interview published on July 16, the day before he testified to Congress about the incident

4,600

Approximate age in years of two Egyptian pyramids that opened to the public on July 14 for the first time since 1965: the “Bent” pyramid, built for Pharaoh Sneferu, and a pyramid that was possibly built for his wife Hetepheres

Cats
Florida officials issue alert prompted by feral cat with rabies near Disney’s Epcot

Dogs
Guide dog is one of 60 new emojis for Apple’s iPhone

‘I benefit from a system that my ancestors built to favor themselves at the expense of others.’

BETO O’ROURKE,
former Texas Congressman and candidate for the 2020 Democratic presidential nomination, revealing in a July 14 Medium post that he and his wife Amy both are descended from slave owners

4 hr. 57 min.

Time it took Novak Djokovic to beat Roger Federer to win Wimbledon on July 14, setting a record for the longest men’s singles final in tournament history; Simona Halep won the women’s title

‘Storm Area 51, They Can’t Stop All of Us.’

THE NAME OF A FACEBOOK EVENT
jokingly calling on people to show up at the Nevada Air Force base at the center of UFO conspiracy theories; after the event got more than a million RSVPs, the U.S. Air Force said on July 15 that it would block unauthorized people from entering

‘TODAY, WE CAN’T BREATHE.’

GWEN CARR,
mother of Eric Garner, whose 2014 death during an arrest galvanized the Black Lives Matter movement, reacting to the Justice Department announcing on July 16 that it will not bring federal charges against the New York City police officer who put her son in a choke hold

‘We know what people want to hear because when we play a Beatles song, all the cell phones come on and it looks like a galaxy of stars, and when we do a new song, it looks like a black hole.’

PAUL MCCARTNEY,
during a surprise performance with Ringo Starr at a sold-out July 13 concert at Dodger Stadium in Los Angeles

ILLUSTRATIONS BY BROWN BIRD DESIGN FOR TIME

SOURCES: GUARDIAN; LOS ANGELES TIMES; NEW YORK TIMES; WASHINGTON POST

The Brief

MORE TO SAY President Trump, whose immigration agenda has faced setbacks, talks to reporters at the White House on July 5

INSIDE

THE WATER SHORTAGE THAT HAS INDIA'S CITIES ON EDGE

THE SUPREME COURT LEGACY OF JOHN PAUL STEVENS

THE MATCH THAT MADE CRICKET HISTORY

PHOTOGRAPH BY OLIVER CONTRERAS

POLITICS

The policy setbacks behind the tweets

By Brian Bennett

IT'S BEEN A BAD FEW WEEKS FOR PRESIDENT Donald Trump's immigration agenda. His Administration tried to add a question on citizenship to the 2020 Census, but the Supreme Court effectively blocked it. He threatened to close the southern border and levy tariffs against Mexico if it didn't do more to stop the flow of migrants, but then backed down when Mexico agreed to modest enforcement measures. He promised massive immigration raids, but they didn't materialize in a significant way.

Facing those failures, outrage over crowded detention centers and a growing backlog of asylum claims, Trump reset the topic on July 14 with a series of racist tweets telling four freshman House Democrats to "go back" to fix the "places from which they came." He doubled down the next day. "These are people that hate our country," he said from the White House, at an event meant to highlight companies making goods in the U.S. "They are free to leave if they want," he said of the elected lawmakers.

The President's remarks showcased the combative approach that he is taking on immigration and the detention crisis as he mounts his re-election campaign. The pattern begins as he threatens a dramatic policy shift, often testing the limits of presidential power and decorum. Even when followed by a retreat, each promise starts up a news cycle that energizes his core supporters. And if he loses that fight? Further rhetorical pushes can start the cycle over again.

3 DAYS OF POLICY MOVES	3 DAYS OF TRUMP'S TWEETS
July 14	
Trump said ICE would conduct large-scale raids, but they didn't materialize as expected; he claimed success anyway.	"Why don't they go back and help fix the totally broken and crime infested places from which they came."
July 15	
The Trump Administration announced changes to asylum practices; they were challenged in court the next day.	"We will never be a Socialist or Communist Country. IF YOU ARE NOT HAPPY HERE, YOU CAN LEAVE!"
July 16	
Jared Kushner presented his "merit-based" immigration plan to Trump's Cabinet.	"Those Tweets were NOT Racist. I don't have a Racist bone in my body!"

EVEN WHEN HIS JABS aren't explicitly about immigration, the people on the receiving end are often those he claims are changing the makeup of the United States. In that, Trump's rhetoric places him within a long history in U.S. politics. That particular anti-immigrant refrain was marshaled by American demagogues like Senator Joseph McCarthy and Father Charles Coughlin, says Timothy Naftali, a historian at New York University and past director of the Richard Nixon Presidential Library and Museum, and racism is more than incidental to it. He sees Trump's words in the context of that old method of drumming up votes and dividing opposition. "By now it is an unmistakable trend," Naftali says. "He attacks people of color, and it is usually women of color."

The Democrats in question—Representatives Alexandria Ocasio-Cortez, Ilhan Omar, Ayanna Pressley and Rashida Tlaib—called Trump's outbursts an attempt to distract from their efforts to solve policy problems, including immigration. "I encourage the American people and all of us in this room and beyond to not take the bait," said Pressley. "When we love this country," said Ocasio-Cortez, "we propose the solutions to fix it."

Crucially, the steps Trump's Administration has tried to take on immigration haven't improved things, says John Sandweg, who served as acting director of Immigration and Customs Enforcement under President Barack Obama. "What they've done has not been effective," he says.

Trump's critics say that even when the policies haven't been implemented, the underlying message from his Administration still gets across. Should a Census citizenship question remain blocked, says Thomas Wolf, a lawyer at the Brennan Center for Justice, "people will still be scared."

As the President responded to the fallout from his tweets—including a July 16 House vote condemning them as racist—his staff pressed ahead on the next round of policies.

Trump's son-in-law and White House adviser Jared Kushner gave a slide show to the Cabinet on July 16 about legislation to overhaul border enforcement and build a "merit-based" immigration system. The Administration also wants sweeping changes on asylum, such that the U.S. would no longer consider claims from people who could have requested protection in countries they passed through on their way. Since October, the Border Patrol has arrested 363,300 migrant family members from El Salvador, Guatemala and Honduras—countries from which people fleeing violence and hardship must go through Mexico to get to the U.S.

The American Civil Liberties Union and other organizations immediately challenged the asylum shift in court. The world well knows what such a challenge could provoke. —*With reporting by* TESSA BERENSON/WASHINGTON

PREVIOUS PAGE: SIPA USA/AP; MANHATTAN: SCOTT HEINS—GETTY IMAGES

IT'S QUIET UPTOWN The Upper West Side and midtown neighborhoods of Manhattan were plunged into darkness the night of July 13, exactly 42 years after New York City's iconic and infamous 1977 blackout. The earlier event lasted 25 hours; this time, power began to return after just over three hours. Con Edison officials said more than 70,000 people were impacted. And the lights weren't all that went out: subway service and Broadway shows saw disruptions too.

THE BULLETIN

India grapples with water shortages as city residents reach their limits

AS SEVERE FLOODING FORCES MILLIONS of people from their homes in northern India, residents in the south of the country are facing a different kind of water crisis: drought. On July 12, a train carrying 2.5 million liters of water arrived in the city of Chennai. That load will provide relief to residents who have struggled with shortages for the past month, but a "Day Zero"—when piped water sources are expected to run dry—is on the horizon for 20 other cities across the country.

DRIED OUT In the 2018 monsoon, Chennai, home to more than 8 million people, saw 55% less rainfall than average—the worst drought in 70 years. Located in the state of Tamil Nadu, Chennai was once rich in lakes and wetlands. But rapid urbanization has diminished these sources; millions of city residents now line up daily in sweltering heat to collect small rations of water. Some people have turned to open defecation as a way to reduce water usage, or are reusing dirty water for cooking and cleaning.

BRACING THEMSELVES According to an Indian government think tank, the country-wide drought has left 600 million people dealing with high to extreme water shortages. Chennai joins the long list of cities around the world facing such emergencies, which have been made more likely by the unpredictable weather patterns caused by climate change. Cape Town, Mexico City and São Paulo have also faced a Day Zero in recent years.

WATER WARS Prime Minister Narendra Modi recently promised piped water for all Indian homes by 2024. But Tamil Nadu officials have come under heavy criticism for failing to plan for Chennai's current water shortage. Protests in the city and across the state have taken place, leading to arrests in some cases. While water providers say that four "water trains" will service the city every day, residents remain skeptical, particularly knowing that several other cities across the country are heading in the same direction. —SUYIN HAYNES

NEWS TICKER

Puerto Ricans call on governor to resign

Police in Puerto Rico clashed with protesters on July 15 as thousands demonstrated outside Governor Ricardo Rosselló's mansion in San Juan. The crowds have called for him to step down over leaked private chats that **revealed Rosselló used sexist, homophobic language when chatting with close aides.**

World hunger on the rise

More than 820 million people worldwide are still going hungry, according to a new U.N. report, despite a target of zero hunger by 2030. The report said that goal posed **"an immense challenge"** considering that the number of people living in hunger globally has risen for the third consecutive year.

Planned Parenthood CEO out

Leanna Wen, the first physician to lead Planned Parenthood in five decades, said on July 16 she had been **dismissed by the organization's board after just eight months.** Wen said she and the board differed over whether to champion abortion as a health care issue, which she prefers, or as a political one.

DIED
Pernell "Sweet Pea" Whitaker, a boxing champion in four weight classes, at 55 on July 14.

SPREAD
Ebola, to the city of Goma, in the Democratic Republic of Congo. The World Health Organization declared on July 17 the outbreak is an international health emergency.

ANNOUNCED
That **Alan Turing,** the British wartime code breaker and computer pioneer, will appear on the U.K.'s new £50 note.

MOVED
The headquarters of the **U.S. Bureau of Land Management,** from Washington, D.C., to Colorado, per a July 16 decision by the Trump Administration.

ARRESTED
R&B singer **R. Kelly,** on charges related to the alleged abuse of women and girls over the course of decades, by a multistate team of investigators in Chicago on July 11. Kelly has denied the accusations.

DETAINED
A **Canadian citizen** in China, on drug charges, amid ongoing tension over Canada's arrest of an executive from Chinese tech firm Huawei in December. China charged two other Canadians with espionage in May.

SOLVED
A **Rubik's Cube,** by an artificial-intelligence system created by researchers at the University of California, Irvine, in one second.

DIED

John Paul Stevens

Enduring Justice

IN LATE 1975, WITH AMERICA STILL REELING from the scandals of the Nixon presidency and the trauma of the Vietnam era, President Gerald Ford tapped an appeals-court judge from Chicago, John Paul Stevens, to fill a recently vacated seat on the U.S. Supreme Court. "The objective of President Ford and his staff was to find somebody who was as apolitical as possible and above reproach in terms of integrity," says Jeffrey Fisher, who clerked for Stevens in 1998–99. "Those were the Justice's two calling cards all the way through his career."

Over the next nearly 35 years, until his retirement from the court in 2010, Stevens would play a role in shaping most areas of the law, influential in majority opinions and firm in dissents. His tenure was marked by a practical jurisprudence and an increasingly progressive sensibility: although he was chosen by a Republican, he emerged as a liberal leader as the Supreme Court moved to the right, and his own views on issues like the death penalty and affirmative action turned to the left over time.

By the time of his death in Fort Lauderdale, Fla., on July 16 at the age of 99, a day after suffering a stroke, he had become a figure of historic importance, a vocal advocate for constraining the federal government in wartime and empowering it to protect civil rights. "He passed away peacefully with his daughters by his side," the Supreme Court said in a statement.

STEVENS WAS KNOWN for being unfailingly courteous—to his clerks, his colleagues and the lawyers who came before him, often asking them politely if he could interject with questions in oral arguments. Born to a privileged family in Chicago in 1920, Stevens had "a very Midwestern style," says Eduardo Peñalver, who clerked for the Justice in 2000–01. "He's just incredibly plainspoken and down-to-earth, and it lulls you into a comfort, and then he'll dazzle you with something that displays his intellect."

'I just tried to do my best all along. That's a goal that every judge should seek to achieve.'

JOHN PAUL STEVENS

Stevens was not inclined to write sweeping opinions, but he helmed the majority in several crucial cases. In 1984, he wrote the court's unanimous opinion in *Chevron U.S.A. Inc. v. Natural Resources Defense Council Inc.*, establishing the principle that when federal law is ambiguous, courts should defer to federal agencies' interpretations of the meaning. "Chevron deference," as it is now known, boosted government regulation; the Trump Administration has sought judges skeptical of the doctrine. Stevens told TIME in a recent interview that *Chevron* was his most significant majority opinion.

But Stevens was not universally in favor of expanded government power. In his 2019 memoir *The Making of a Justice,* Stevens cites 2000's *Apprendi v. New Jersey* as another important majority opinion. Stevens held that any fact that could increase a defendant's criminal sentence beyond the statutory maximum needed to be found by a jury beyond a reasonable doubt. Stevens also authored two key decisions limiting the President's wartime power after 9/11. In *Rasul v. Bush,* in 2004, he wrote the opinion bringing detainees at Guantánamo Bay under the jurisdiction of the federal courts; two years later, in *Hamdan v. Rumsfeld,* he rejected President George W. Bush's plan to try the detainees under military commissions.

While Stevens was collegial and not prone to provocative writing, he was known for a

STEVENS: DOUG MILLS—THE NEW YORK TIMES/REDUX; CRICKET: GLYN KIRK—AFP/GETTY IMAGES; LAGARDE: STEPHEN VOSS—REDUX

few dissents in cases that had an enormous impact on the country. In *Bush v. Gore,* the 2000 decision that resulted in Bush winning the presidency, Stevens wrote in dissent, "Although we may never know with complete certainty the identity of the winner of this year's Presidential election, the identity of the loser is perfectly clear. It is the Nation's confidence in the judge as an impartial guardian of the rule of law."

In his final years of life, Stevens became increasingly vocal about what he viewed as the court's gravest error during his tenure, the 2008 decision in *District of Columbia v. Heller,* which held that the Second Amendment protects an individual's right to possess a firearm. Stevens dissented. "As history has demonstrated in recent years, the tragedies are multiplying one after another," he told TIME of the decision. "And the decision of the court in *Heller* has contributed to that."

Stevens' decades on the court made him the third-longest serving Justice in American history. When asked to reflect on nearly a century of life, and what legacy he hoped he left on the nation's highest court, Stevens' signature humility reigned. "I just tried to do my best all along," he said. "That's a goal that every judge should seek to achieve."

—TESSA BERENSON

WON

The Cricket World Cup

England's game

LET NO ONE EVER AGAIN say cricket is a dull game. The exhilarating final moments of the ICC World Cup final on July 14 convulsed spectators on opposite sides of the world as England and New Zealand went to a "super over"—cricket's answer to a penalty shoot-out—in what was hailed by some commentators as the greatest match in the sport's history. Set a target of 242 runs to win, England had drawn even in the very last ball of the game. In a nail-biting tie-breaker, the team took the trophy by the slimmest margin possible.

In countries where bats are cylindrical, the tournament received little attention. But an audience estimated in the billions made this the world's second most-watched sporting tournament. The other competitors, mostly former outposts of the British Empire, may have been disappointed to see the old enemy win the contest for the first time. But the players on this England team, whose roots reach from the Caribbean to Asia, reflected the sport's diversity and breadth—and few viewers could have been disappointed by that climax, a pure encapsulation of all the tension, joy and heartbreak sports can provide.

—DAN STEWART

RESIGNED

Christine Lagarde

IMF chief

NEARLY EIGHT YEARS AGO, AS serious men in suits convened at conferences around the world to debate how to save European countries from debt, *austerity* was the word of the day. The ministers urging budget cuts didn't expect pushback from Christine Lagarde, the lawyer and onetime synchronized swimmer who'd become the first female head of the International Monetary Fund (IMF) just months before. But Lagarde made her position clear: it was time to invest in growth.

Lagarde, who submitted her resignation from the IMF on July 16, is credited with helping usher the world economy away from a path that could have led back to recession. With her recognizable shock of white hair, the French-born Lagarde raised the profile of the IMF (where she'll stay on until Sept. 12), speaking on the global economy from Davos to *The Daily Show.* In fact, her tenure was so successful that she was nominated as the head of an even more powerful institution, the European Central Bank, where she will again take up the challenge that helped her gain prominence: how to steer the euro zone through its latest challenges to growth.

—ALANA SEMUELS

South African track star **Caster Semenya** won't stop fighting for her right to run, just as she is

By Sean Gregory

CASTER SEMENYA WALKS ALONG THE SIDE OF the Stanford University track in late June, stopping to take selfies with her fans, who crowd around a fence to get a glimpse of her. "We love you, Caster!" shouts one onlooker. A guy gives her a thumbs-up. "I can't believe I'm this close to her," says a woman who, like Semenya, hails from South Africa. The two-time Olympic gold medalist and triple world champion in the women's 800 m has just won the prestigious Prefontaine Classic at Stanford, finishing the race in 1 min. 55.70 sec., the fastest 800-m time ever clocked on American soil. "When you're great," Semenya tells TIME while enjoying the adoration, "you're great."

If the global governing body for track and field had its way, however, the scene at Stanford would be a mirage. Last year, the International Association of Athletics Federations (IAAF) issued new rules mandating that female athletes with "differences of sex development"—defined as the presence of XY chromosome pairings normally found in men—could not compete in women's races from the 400 m to the mile, unless through medical intervention they lowered their natural testosterone to a level closer to what the IAAF calls the "female range." The IAAF argues that the high levels of testosterone produced by athletes with such a genetic makeup provide them with an unfair advantage over other female athletes in these races. Semenya, who has faced scrutiny surrounding her gender for a decade and would be ineligible to run the women's 800 m naturally under these new rules, challenged them in the Court of Arbitration for Sport (CAS), which settles global sports disputes. In May, the CAS announced it was upholding the IAAF regulations; Semenya then took her case to Switzerland's Supreme Court, which ordered a temporary suspension of the rules until it issues a decision. So Semenya ran the Prefontaine race without having to suppress her hormones, and she can compete at the world championships that begin on Sept. 27 in Doha, Qatar.

Her case has stirred passions around the world, as it touches on essential questions about genetics, gender identity and fair play. Is it even possible to classify athletes as men and women when the human body sometimes sends out more complicated signals?

Semenya was born a woman, was raised as a woman and is legally recognized as a woman. "Of course I'm a woman," she says back at her hotel north of Palo Alto, Calif. "I have a vagina. I don't have a penis." She considers the IAAF rule discriminatory. "What they're saying is, when a woman performs at a high level, it's a problem," says Semenya. "But when a man performs, ohhhh great, all hail the greatest." Even the CAS said in its decision that the IAAF regulations are "discriminatory," but that such discrimination is reasonable and necessary to promote a level playing field for female athletes.

Semenya insists if the IAAF rule holds up, she'll refuse to take medication to lower her testosterone. "If I have to walk away, of course I will walk away," she says. "It's like killing yourself." In CAS testimony, Semenya revealed from around 2010 to 2015, at the IAAF's insistence, she took birth control pills to lower her testosterone; she said the drugs caused her to feel sick constantly, suffer from regular fevers and experience abdominal pain, among other symptoms. Her confidence suffered. She felt like the IAAF treated her like a "lab rat," and she says she won't take part in another experiment.

What baffles Semenya most: Why would the IAAF want to drive a star attraction from its sport? With her name consistently in the headlines for both her dominant performances—she has won 31 straight 800-m races dating back to 2015—and the biological controversies, Semenya is probably track and field's biggest celebrity. She's endorsed by Nike, which featured her in a new ad campaign. Last year, LeBron James caught one of her races in Berlin. One fan at the Prefontaine Classic swears she "never felt more alive" than when she just watched Semenya glide. "If people want to come watch Caster Semenya run, then let them watch Caster Semenya run," Semenya says. "What they care about is just seeing one human inspiring another human. Don't destroy it! Is it that much to ask?"

SEMENYA, WHO EARNED a university sports-science degree in South Africa in 2018, has taught herself to silence all the noise around her. She believes the IAAF is "obsessed" with her. By paying track officials little mind in return, she's already a step ahead. "You're a free soul," she says. "I run my race, then I'm going home. You're thinking of me. I'm giving

SEMENYA QUICK FACTS

Medal upgrade
Semenya finished second in the 800 m at the 2012 London Olympics, but was bumped to gold after Russia's Mariya Savinova was found guilty of doping.

Fancy footwork
Growing up in a rural village, Semenya played soccer before switching to track. Without a coach to teach her sprint technique, she took to middle distance, "where you just kind of run around," Semenya says.

Still a blur
In May in Doha, Qatar, Semenya clocked the year's fastest 800 m, and in late June the fastest-ever 800 m on American soil.

GEOFFROY VAN DER HASSELT—AFP/GETTY IMAGES

you nightmares. I'm not even thinking about you." Semenya, however, does use our interview to call out IAAF president Sebastian Coe. She considers him a "chicken" for making his arguments against her in court and the media, rather than engaging with Semenya directly. "He must have balls to come tell me that, 'Look, Caster, I don't want you,'" says Semenya. "Then I will tell you, that's your problem." (In a statement, the IAAF writes that Coe and the organization "feel very strongly" about preserving fair competition for female runners. "This has never been about one athlete.")

Semenya talks in a direct manner, with a sort of contagious defiance. She'd seem to make a good psychologist, pastor or politician. (When I mention this to her, she tosses aside public office and preaching. But she's open to a sports-shrink practice.) From a young age growing up in a rural village in the South African province of Limpopo, Semenya knew she was different. "I have a deep voice, I don't have boobs, I play around with boys," she says. "It's O.K." But she never questioned her gender. "It does not change that I'm a woman," she says. "I'm not a man; I'm not going to live like a man. But then if I like trousers, I'm going to wear trousers. If I like suits, I like suits. I'm not going to go around wearing skirts, wearing dresses if they don't suit me." So when the IAAF said in court that Semenya was "biologically male," the description hurt her "more than I can put in words." It cut to her very being. "You're calling me something I'm not," says Semenya. "You should be careful on that."

'If people want to come watch Caster Semenya run, then let them watch Caster Semenya run.'

CASTER SEMENYA, track star

With all her gold medals, Semenya could easily abandon this legal fight and walk away from her sport with her place in the record books. But she still has work to do, both on and off the track. Semenya's in her 12th international season: her idol, 800-m runner Maria Mutola of Mozambique, ran for 21 years and competed in six Olympics. "Why can't I do that?" Semenya says. The 800-m world-record time, set in 1983 by Jarmila Kratochvilova of Czechoslovakia, is within reach: Semenya ran her fastest-ever race just a year ago, less than a second off Kratochvilova's pace and the fourth best time ever. "I want to break records and then be the greatest of all time," Semenya says.

Then there's the larger battle for her rights, and the rights of others to run free. "There are a lot of athletes who will have the same problem as me, but they cannot fight," says Semenya. "If I don't fight for them, no one will fight for them."

So she plans to run at the Tokyo Olympics next summer, plus Paris in 2024 and Los Angeles in 2028. In June, she gave a pep talk to South Africa's World Cup team in Paris: she says she could give soccer a shot too. At the 2032 Olympics—wherever they take place—Semenya would be 41: maybe, she jokes, she'll run a marathon. Or maybe that's not a joke. "The train is moving, I'm not stopping, you understand?" says Semenya. "I'm here to stay. You'd better get used to it. Or walk away." ◻

Working in the Clouds

Assistance program creates miracle in southwest China's Tibet Autonomous Region By Li Nan

Liang Nanyu, Deputy Mayor of Shuanghu County in southwest China's Tibet Autonomous Region, which is also the highest county in the world, has the distinction of initiating several firsts in the past three years.

He made it possible for the county, with an average altitude of 5,000 meters above sea level, to have its first C-section operation, a medical record. He was the first to get local students enroll in free seats in schools in big cities. Also, he upgraded the local economy's pillar industry, ensuring greater income for impoverished residents.

The 39-year-old arrived in Shuanghu in July 2016 as part of a Central Government program to assist in the autonomous region's development. In 1994, the Central Government made a new policy to provide greater support for Tibet. Some developed provinces were asked to help specific cities and counties in Tibet under the partnership assistance program. Eight years later, 17 leading state-owned enterprises (SOEs) joined the program. The China National Petroleum Corp. (CNPC) was one of the team and Liang, one of its officials, was assigned to Shuanghu.

Shuanghu lies at the heart of the Changtang National Nature Reserve on the Tibetan Plateau, 700 km northwest of Lhasa, capital city of the autonomous region. Established in 2013, it is China's youngest county and is scarcely populated.

After his arrival, Liang suggested some changes to the assistance projects so that they would focus more on healthcare services, education and job-generating industries.

World's highest C-section

With its inhospitable terrain and rarified air, Shuanghu is also known as the "dead zone." Local average life expectancy is 58 years, 10 years less than the regional average. "Locals suffer from widespread high-altitude illnesses and newborn deaths," Liang said.

Before Liang's arrival, there were no surgeons and no functional surgical equipment in the local hospital. If a woman went into a difficult labor, she had to be taken to Nagqu, a bigger city 550 km away and nearly seven hours' journey.

From 2009, a medical team from the CNPC began to visit the county once a year to provide free medicine and treatment. But they addressed just short-term ailments, not major diseases. So Liang recommended that surgery be introduced.

The first operation was a C-section. "Many thought it was an impossible mission," Liang said. The preparation took 10 months. A team from the People's Hospital in Shuanghu was sent to the CNPC Central Hospital in Hebei Province in north China to receive training. New medical equipment for the operation such as respirators was also bought.

August 23, 2017, was a landmark day for both Shuanghu and Liang. At 19:30, an expectant mother was sent to the operation room. Liang, together with the patient's family, waited outside. "I felt more anxious than when my own baby was born eight years ago," he said.

At 20:33, a newborn's cries broke out and when the baby was brought out, all those waiting outside smiled in relief. The birth of this child set a record for C-section done at the highest altitude in medical history—4,962 meters.

Today, 28 doctors in Shuanghu are trained to do appendicitis operations. Changchub Drolma, head of the People's Hospital of Shuanghu, said the hospital now has more qualified staff and advanced machines, providing better services.

In the coming years, the aim is to ensure timely treatment for common diseases. Liang said, "If we cannot ensure people's health, we cannot achieve moderate prosperity in all respects."

Boost for education

Children in the autonomous region enjoy 15 years of free education, when most other places in China have a nine-year compulsory education system. Still, the high school enrollment rate in Shuanghu was less than 10 percent. Most parents, herdsmen by profession, didn't think education could give their children a promising future.

Though 21 provinces and cities outside Tibet offer free classes for meritorious Tibetan students, from 2013 to 2017, no student from Shuanghu made it to the free classes.

Then thanks to Liang's efforts, 25 students in Shuanghu were sent to study in Lhasa and Beijing for free. When the first batch of students was selected in 2017, their parents didn't turn up to watch the selection. Nobody cared whose child would be selected.

Then last year, three students passed the tests to enroll in the free Tibetan classes in other provinces and this time, it created a strong impact in Shuanghu. During the screening to select two students who would be sent to Lhasa, 12 parents came to oversee the process. "It was beyond my expectations. From showing little interest in education to monitoring the selection procedure, the local parents showed a pleasant change," Liang said.

A game changer

Shuanghu is an impoverished county with 21.9 percent of the population living under the poverty line. "Our target is to eliminate poverty this year," Liang said.

While looking for industries that could provide a sustainable way out of poverty, he discovered the local brine shrimp egg industry. Some saltwater lakes in Shuanghu are home to the brine shrimp whose eggs are perfect for aquaculture. Since the 1990s, selling raw brine shrimp eggs has been the main source of Shuanghu's revenue and local residents' income. "It's the purse of Shuanghu," Liang said.

He planned to upgrade the industry. After a rigorous third-party scientific study and dozens of market surveys, his plan was first, to build a factory to process the eggs, which would fetch more profit; second, to produce a specialty food with the eicosapentaenoic acid (EPA) present in

COURTESY PHOTO

Liang Nanyu (left), Deputy Mayor of Shuanghu County in southwest China's Tibet Autonomous Region, gives free traditional Chinese medicine to local residents in the county on January 3. The medicine was provided by the Beijing Yuruomu Charity Foundation

COURTESY PHOTO

The first batch of Tibetan children from Shuanghu start their studies in Lhasa, capital city of southwest China's Tibet Autonomous Region, on August 31, 2017, with free tuition and accommodation

the eggs, a fatty acid that can lower the risk of heart diseases and help regulate blood fat and sugar as well as prevent insomnia; finally, to develop a drug with the EPA.

Before 2015, most of Shuanghu's brine shrimp eggs were snapped up at a very low price by one businessman from a neighboring province. To end the monopoly, Liang organized two public tenders in 2017 and 2018, but both failed, allegedly due to the trader's interference.

But Liang didn't give up. "Selling the eggs is a key way to pull Shuanghu out of poverty. It's our duty to ensure a good price for local residents," Liang said. He planned the third public tender in January 2019. At that time, the volume of imported brine shrimp eggs in China was large, resulting in the price of the processed product being halved. Liang was prepared for the worst. If the tender failed again, they would outsource the raw materials to make the finished product.

Before the bidding, he hit upon the idea of circulating the tender notice by e-mail. In an accompanying letter, he said: "Catching brine shrimp eggs means fishermen have to camp by the lake in freezing temperature for a month. It is not easy. I hope you will work with us to create a win-win future based on mutual trust."

And his efforts paid off. Ten bidders attended the public bidding. "We recorded a price of 70,000 yuan ($10,126) per ton, the highest in the history of Shuanghu," Liang said.

In August, the processing factory will be ready and the processed eggs will bring more profits than the raw material. "Every impoverished Shuanghu resident is expected to earn an extra annual income of 3,990 yuan ($594) on average," Liang said.

In addition, a specialty food developed from the eggs is expected to be available in the market soon. The county government is interested in partnerships with big domestic pharmaceutical companies to develop a drug with the EPA found in the eggs.

"Processing the eggs will create a reliable and long-term way out of poverty," Liang said.

Mission continued

Due to the high altitude and ensuing difficulties, officials and professionals from supporting provinces, government departments and SOEs are deployed in Tibet for just three years. During their tenure, more than 30 percent of them suffer from high blood pressure, hyperlipidemia, and hyperuricemia, according to Shao Zhengyi, a Beijing doctor who worked at the People's Hospital of Lhasa in 2012.

After three years in Shuanghu, Liang has all three problems plus bone degradation, insomnia and frequent headaches due to the lack of oxygen in the air.

He also misses his wife and his 8-year-old daughter, who are in Beijing, thousands of miles away. "Because of my long absence, I am like a stranger to my daughter, who hardly talks to me," Liang sighed.

Though his tenure is to end on July 28, Liang has decided to ask for another three years' extension. "It's a critical moment in our fight against poverty. I must stay on to develop the local industry and accomplish my tasks," he said. "I hope my daughter will understand when she grows up." ■

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BUSINESS

WHEN HUMANS BECOME ROBOTS

By Emily Guendelsberger

A group of workers with their fists raised in solidarity hold a scrawled sign: "We are humans not robots!" They and others at an Amazon warehouse in Minnesota protested in March and on July's Amazon Prime Days. They were speaking against the day-to-day dehumanizing reality of their workplace.

INSIDE

NEW EBOLA CRISIS DEMANDS POLITICAL ACTION

ARGENTINA LOOKS TO A POPULIST LEADER

AMERICANS SHOULD HELP ALONG THE BORDER

If your only interaction with Amazon is packages arriving on your doorstep, it can be hard to understand what workers are unhappy about, or why one described his fulfillment center as an "existential sh-thole," or why so many others shared stories about crying at work.

I'm among them. I took a job in an Amazon fulfillment center in Indiana over a few weeks—along with a call center in North Carolina and a McDonald's in San Francisco—to investigate the experience of low-wage work.

I wasn't prepared for how exhausting working at Amazon would be. It took my body two weeks to adjust to the agony of walking 15 miles a day and doing hundreds of squats. But as the physical stress got more manageable, the mental stress of being held to the productivity standards of a robot became an even bigger problem.

Technology has enabled employers to enforce a work pace with no room for inefficiency, squeezing every ounce of downtime out of workers' days. The scan gun I used to do my job was also my own personal digital manager. Every single thing I did was monitored and timed. After I completed a task, the scan gun not only immediately gave me a new one but also started counting down the seconds I had left to do it.

Workers protest at an Amazon fulfillment center in Minnesota on March 8

It also alerted a manager if I had too many minutes of "Time Off Task." At my warehouse, you were expected to be off task for only 18 minutes per shift—mine was 6:30 a.m. to 6 p.m.—which included using the bathroom, getting a drink of water or just walking slower than the algorithm dictated, though we did have a 30-minute unpaid lunch. It created a constant buzz of low-grade panic, and the isolation and monotony of the work left me feeling as if I were losing my mind. Imagine experiencing that month after month.

I felt as if the company wanted us to be robots—never stopping, never letting our minds wander off task. I felt an incredible amount of pressure to repress the human "failings" that made me less efficient than a machine. (Amazon in response said that this is not an "accurate portrayal of working in our buildings" and that it is "proud of our safe workplaces.")

UNLESS YOU'VE WORKED a low-wage service job over the past decade or so, it's hard to understand how stressful widespread monitoring technology in the workplace has made life for the bottom half of the labor market. The media have tended to focus on unsafe work conditions and low wages at fulfillment centers. Compared with companies offering other warehousing and unskilled jobs, dozens of current and former workers I spoke to agreed, Amazon was obsessed with safety and generally did have better wages and benefits, even before it raised its minimum wage to $15 an hour.

Amazon is the apex predator of the modern economy; as with Walmart in the '90s, anyone who wants to compete with it will have to adopt its labor practices. According to Amazon, its U.S. workforce will reach 300,000 employees this year, many of whom work in blue collar jobs. Overall, low-wage jobs have been so routinized and deskilled that "about 47% of total U.S. employment is at risk" of being lost to automation, according to a 2013 Oxford study.

Human workers are still necessary. We remain vastly superior to machines at conversation, creativity, visual recognition and fine motor control, and we're still a little cheaper. But we're not as good at highly inflexible, repetitive tasks as machines and algorithms.

The more human a worker is, the less productive and desirable she is in the cold eyes of the market. And today's technology makes it possible for employers to force workers to suppress their humanity or risk losing their jobs. I'd bet that most of you, even those with white collar jobs, can already identify those same kinds of metrics and monitoring technologies creeping into your daily life.

Those Amazon workers want to be treated like human beings. Sounds reasonable to me.

Guendelsberger is the author of On the Clock: What Low-Wage Work Did to Me and How It Drives America Insane

SHORT READS

Highlights from stories on **time.com/ideas**

Party before country

Why won't Republicans condemn the President for his tweets? According to Carol Anderson, author of *White Rage: The Unspoken Truth of Our Racial Divide,* it's because he promises them a return to white dominance: **"That's why they've willingly gone along with and participated in a sustained attack on the country itself, allowing it to grow weaker so that they could feel stronger."**

An urgent call for action

The last Ebola crisis claimed over 11,000 lives, and former USAID administrator Gayle E. Smith believes this one could be even worse if the U.S. doesn't step up its efforts to fight the disease. **"We have the tools to defeat Ebola," she writes. "What we're missing is the political will."**

Where credit is due

The contributions of Eunice Newton Foote, the first woman in climate science, have been largely overlooked. Katharine Wilkinson, a vice president at Project Drawdown, a nonprofit focused on climate solutions, suggests that we **"amend that loss by supporting women in climate today."**

AMAZON: AWOOD CENTER; IMMIGRATION: MARIO TAMA—GETTY IMAGES

THE RISK REPORT

Argentina faces choice between hard reforms and populism

By Ian Bremmer

NO LEADER WANTS to face voters when times are tough, particularly in this era of wild-card winners, incumbent losers and brand-new political parties in country after country. That's why Argentina's President Mauricio Macri is still widely considered an underdog to win re-election in October.

Last year he told Argentina's people that after years of economic crisis and isolation, "the worst is over." That might be true. Their currency has stabilized, inflation is finally slowing, and the cost of borrowing is down. On the other hand, the improvement is marginal. The economy remains in recession, the unemployment rate is still 10%, and price inflation is above 50%. To meet the demands of the International Monetary Fund—a lender that many Argentines love to hate for the austerity it demanded in return for its cash through years of economic hardship—Macri's government has cut spending.

The opponent he's likely to face in a second-round runoff doesn't carry much political baggage. Alberto Fernández presents himself as a moderate of the center-left, a man who pledges to win a better deal from the IMF without destroying the country's hard-won financial credibility. But his running mate is another matter. Fernandez's choice for Vice President is former President Cristina Fernández de Kirchner (no relation), the biggest lightning rod in the country and now Macri's best chance to beat Fernandez.

Cristina, as she's known to her supporters, governed Argentina from 2007 to 2015. During those eight years, she nearly ran the country into the ground, in part by playing to voter frustration by declaring war on a group of foreign lenders. Her government manipulated economic statistics. Graft in politics and business was widespread. Cristina faces several ongoing corruption cases. If Alberto Fernández chose her as his election partner, it is because of her loyal following among Peronist voters.

Macri, the man elected four years ago to right a listing economic ship, can hope the economy continues to improve quickly enough to blunt public demand for change. But he knows it takes time for voters to feel even a strong recovery—and time is slipping away. He has tried to co-opt his opponents' populism by choosing a moderate Peronist as his running mate. He has focused his campaign at times on noneconomic accomplishments, like better roads and cleaner water on his watch.

Macri can claim former President Cristina Fernández de Kirchner is to blame for the depth of the hole Argentina is still digging itself out of

But in the end, his message will sound something like this: "You are not yet better off than when you first elected me President, but you are far better off than when Cristina Fernández de Kirchner was your President." He can argue that outside forces beyond his control, like lower prices for Argentina's exports and expectations for higher interest rates in the U.S., have made things tougher. He can claim that Cristina is to blame for the depth of the hole Argentina is still digging itself out of, and her presence on the opposition ticket will help him make her past rule a warning for the future.

That's still a tough sell for the incumbent Macri, particularly in an era when voters in the U.S., Mexico, Brazil, France and Italy have shoved aside establishment politicians. We'll get an early indication of Argentina's political temperature on Aug. 11, when voters turn out, or fail to, for party primaries. That will provide a good gauge of whether the dominant mood is demand for change or fear that the future might mean a return to an ugly past. ◻

IMMIGRATION

Let Americans volunteer at the border

After reports surfaced of unsanitary conditions in detention centers at the border, many Americans wanted to help. Currently, though, there is no way to donate to or volunteer at facilities run by Customs and Border Protection or Immigration and Customs Enforcement.

While there's a widespread notion that allowing people to do so would violate the Antideficiency Act, which prohibits federal agencies from accepting voluntary services, the act includes an exception "in cases of emergency involving the safety of human life or the protection of property." Furthermore, the office of public affairs for the Federal Bureau of Prisons, which does accept volunteers, said in an email that the head of the Government Accountability Office "has held that federal agencies can accept gratuitous services without violating the Antideficiency Act."

"It doesn't have to be this way," says Elora Mukherjee, a professor at Columbia Law School and the director of the university's Immigrants' Rights Clinic, who has interviewed children at the border. "This isn't a matter of the law. It's about cruelty."

—Julissa Arce

Protesters with water bottles at a detention center in Clint, Texas

1969

Obsessed with the Moon.

2019

Obsessed with the Earth.

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Volkswagen

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INSIDE THE NEW RACE TO THE MOON

BY JEFFREY KLUGER

PHOTOGRAPHS BY CHRISTOPHER PAYNE FOR TIME

IT'S EASIER TO LOVE APOLLO 11 IF YOU WERE AROUND TO SEE IT HAPPEN.

For those who didn't camp along the Cape Kennedy causeway to watch the Saturn 5 liftoff on July 16, 1969, or huddle around a rabbit-ear TV to watch Neil Armstrong climb down the ladder and walk on the surface of the moon four days later, it'll always have a whiff of cable-channel documentary. And yet it doesn't for Elon Musk.

Musk was born in 1971, in Pretoria, South Africa, two years after the Apollo 11 landing and half a world away from the country that achieved the great lunar feat. But somehow, he absorbed the primal power of the thing he was not there to see happen. "Apollo 11 was one of the most inspiring things in all of human history," he said in a July 12 interview at the Hawthorne, Calif., headquarters of SpaceX, the rocket company he founded in 2002 that has since become its own icon of space exploration. "I'm not sure SpaceX would exist if not for Apollo 11."

Today, SpaceX is one of a handful of powerful players—starry-eyed billionaires and the world's two richest countries—competing in a race to set up shop on the moon. In the 1960s, it was a two-party sprint between the U.S. and the Soviet Union to be the first to get boots on the lunar surface, but this time around the U.S. finds itself in a bigger, multifront competition with private companies like SpaceX and Jeff Bezos' Blue Origin and international powers, most critically China.

Like the Soviet Union and the U.S. during the Cold War, Beijing is using its space ambitions as a powerful ideological—and even expansionist—tool of statecraft. In January, China successfully landed Chang'e-4, a small base station and rover, on the far side of the moon, becoming the first nation to touch down in that unseen hemisphere. "We are building China into a space giant," Chang'e-4 chief designer Wu Weiren said at the time.

Last year, Ye Peijian, the leader of the country's lunar program, described the agency's work by invoking Beijing's growing dominance across the South China Sea islands: "The universe is an ocean, the moon is the Diaoyu Islands, Mars is Huangyan Island. If we don't go there now, even though we're capable of doing so, then we will be blamed by our descendants." That may just be celestial saber rattling, but it's gotten the attention of Western observers. "I have no doubt that within the next five years, they will complete [their own space station] and announce a manned lunar program," says Joan Johnson-Freese, a professor of national-security affairs with expertise in space, science and technology at the Naval War College in Newport, R.I.

Driving the new space race is a potent mix of economic, technological and geopolitical imperatives. There are possible fortunes to be made from lunar ventures. Space-based businesses currently contribute $350 billion to global gross domestic product, a figure projected to jump to $1.4 trillion by 2040, according to Morgan Stanley. The moon could become a first outpost in efforts to colonize and

NASA's Vehicle Assembly Building, built in 1966 for the Saturn 5 rocket

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exploit space. Just one example: there's intense speculation about the fortune to be made from mining the moon for rare-earth metals used in electronics manufacturing. With current spacecraft tech, that fortune is canceled out fast by the billions of dollars it would cost to ship goods between Earth and the moon, but technology changes, and no one wants to be left out of a potential lunar gold rush.

There are scientific and technological reasons to go to the moon too. Observatories on the lunar far side—shielded from earthshine and earthly radio emissions—would be more powerful and see farther than telescopes on the surface of the planet or orbiting it. And while NASA has been known to oversell the commercial spin-offs from the space program ("Off the Earth, for the Earth" is one of the agency's slogans, by now shopworn), there's no denying the decades of evidence that technology first developed for space travel often has terrestrial applications: scratchproof glass; lightweight, high-storage batteries that make cordless tools possible; memory foam and fireproof fabric; and, most significantly, GPS navigation all had their origins in systems designed for exploring space.

Future benefits could include applications in artificial intelligence, biometric sensors and air-traffic control, as well as crop fertilizers and greenhouse LEDs adapted from systems now in development for establishing otherworldly agriculture.

Then, too, there is the fact that any road to Mars likely runs straight through the moon. Homesteading a world that is only three days from Earth is the best way to test the life-support infrastructure that would be needed on a far more distant—and a good deal less barren—Mars.

All the lunar competitors are eyeballing the same spot on the surface: the south pole, which is as close to a fertile crescent as exists on the moon. The southern craters, cast in permanent shadow, are home to plentiful deposits of water ice, which could be used to sustain humans and their crops. The water can be broken down into oxygen, which can then be used as atmosphere for crews, and hydrogen, which—recombined with the oxygen—can make a simple, powerful and clean rocket fuel. Wrestling water and rocket fuel off Earth for a deep-space mission is a lot harder and more labor-intensive than carrying it up from the moon, where the gravity is one-sixth that of Earth, and then parking it in lunar orbit. Spacecraft on their way to Mars could, in theory, stop by the moon to top off their tanks before lighting out for deeper space.

None of that is outside the reach of current technology, but since the final Apollo lunar mission returned home in 1972, NASA's crewed space program has pursued much narrower goals, contenting itself with dog paddling in low Earth orbit. And since the final NASA space shuttle stood down in 2011, the U.S. has not even had its own way to get astronauts into space, instead buying seats—at a cool $80 million per round

MOONWARE

Political will and economic incentives have jump-started a new age of space travel. Modern technology promises to make future moon trips more economical and sustainable than Apollo-era vessels:

1 Rockets

THE ORIGINAL
With power that surpassed all prior rockets, the Saturn 5 used and discarded three stages to shoot the Apollo modules (sitting atop) to the moon.

PUBLIC
The U.S. and China have ambitions to put humans on the moon. NASA's Space Launch System (SLS), being built now, has several configurations.

PRIVATE
Aerospace companies are designing rockets that can land and relaunch, thereby cutting costs. These firms may collaborate with NASA.

U.S.
Saturn 5
OPERATIONAL 1967–73
363 FT.
7.6M LB. OF THRUST

U.S.
SLS
LAUNCH BY 2024
365 FT.
8.8M LB. OF THRUST

CHINA
Long March 9
LAUNCH BY 2030
305 FT.
THRUST UNKNOWN

BLUE ORIGIN
New Glenn
LAUNCH BY 2021
313 FT.
3.9M LB. OF THRUST

SPACEX
Super Heavy/ Starship
LAUNCH BY 2021
387 FT.
10.8M LB. OF THRUST

trip—aboard Russia's Soyuz spacecraft.

Now, though, there is a renewed focus on lunar dominance. In March, Vice President Mike Pence, the head of the newly re-established National Space Council (it had been disbanded since 1993), announced that the Trump Administration would put Americans on the moon by 2024. "It is the stated policy of this Administration and the United States of America to return American astronauts to the moon within the next five years," he said at a council meeting in Huntsville, Ala. "'Urgency' must be our watchword."

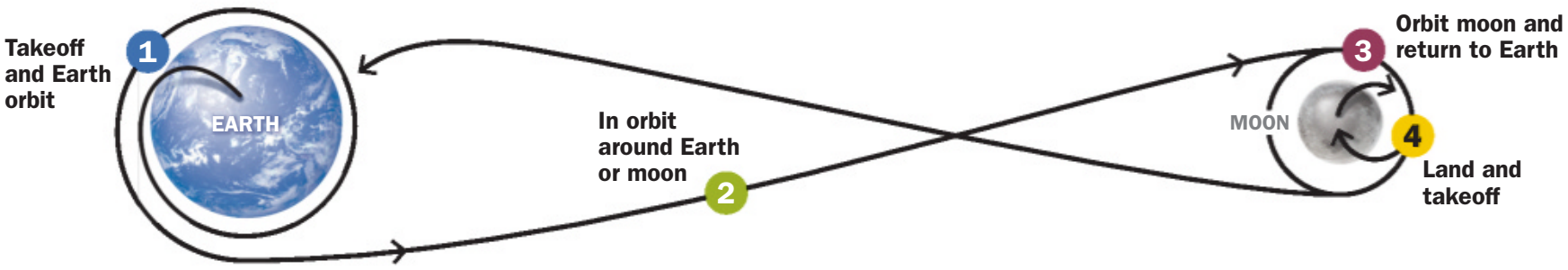
The timing for such a challenge was good because Florida's Space Coast is once again buzzing with activity. NASA leased Cape Canaveral's launchpad 39A, from which nearly all of the Apollo lunar missions took off, to SpaceX, which has plans for a crewed flight around the moon as early as 2023. "I can't believe we get to use that pad," says Musk. "We're not worthy! This pad is too good."

The company also holds the lease on nearby pad 40 and has built a 54,000-sq.-ft. hangar on the Canaveral grounds for rocket processing. Its Hawthorne, Calif., factory teems with workers and clangs with machinery under construction, including two Dragon spacecraft being readied in a clean room, one to test the ship's escape system, the other for an automated flight to the International Space Station. But SpaceX envisions much more. "We really want to have a vehicle that is capable of sending enough payload to the moon such that we could have a full lunar base, like we've got a permanently occupied base in Antarctica," Musk says. "[But] it'd be absolutely way cooler to have a science base on the moon."

Similarly, NASA has leased Canaveral's launchpads 36 and 11 to Blue Origin, the rocket company owned by Amazon CEO Jeff Bezos. Blue Origin has built a glittering $200 million factory on the Canaveral grounds and is planning a 90-acre expansion. In May, Bezos unveiled a mock-up of the company's Blue Moon lunar lander and echoed the Trump Administration's 2024 target date. "'It's time to go back to the moon," he told a crowd in Washington, D.C., "this time to stay."

NASA itself is stirring anew, its partnerships with private companies begun under the Obama Administration now bearing all manner of fruit. SpaceX and Virginia-based Orbital Sciences have made frequent uncrewed cargo runs to the International Space Station, and both Boeing and SpaceX hope to fly crews as early as next year. United Launch Alliance, a partnership of Lockheed Martin and Boeing, may supply the upper stage of the new rocket NASA hopes to use to send astronauts on the 2024 lunar trip.

Meanwhile, on Canaveral's launchpad 39B, NASA has erected a $500 million, 10.5 million-lb., 38-story mobile launch tower that will service that new rocket: the giant Space Launch System (SLS)—NASA's 21st century version of Apollo's Saturn 5 moon rocket. Since Pence's announcement, NASA



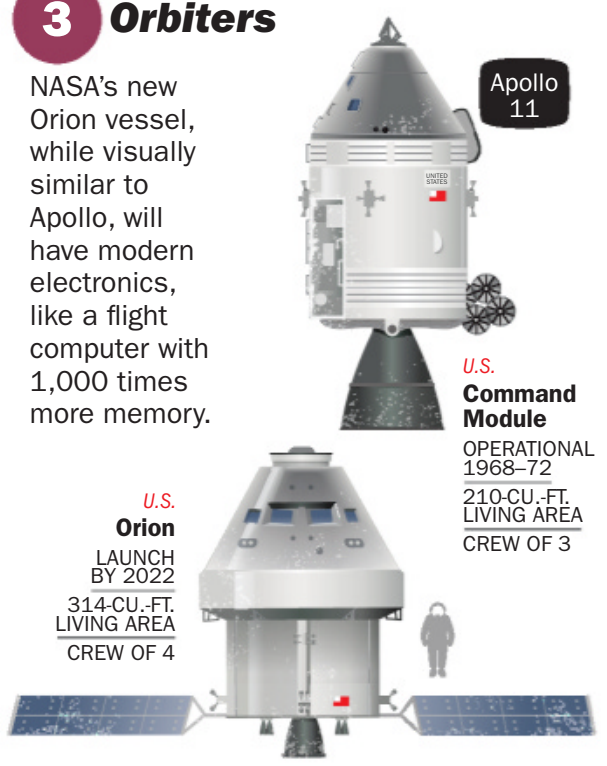
2 Way stations

Since 1998, the Earth-orbiting International Space Station has been the world's space lab. NASA is planning a much smaller station, Gateway, to orbit the moon.

U.S.
Gateway
LAUNCH BY 2023
1,942-CU.-FT. LIVING AREA
EXPANDABLE

3 Orbiters

NASA's new Orion vessel, while visually similar to Apollo, will have modern electronics, like a flight computer with 1,000 times more memory.

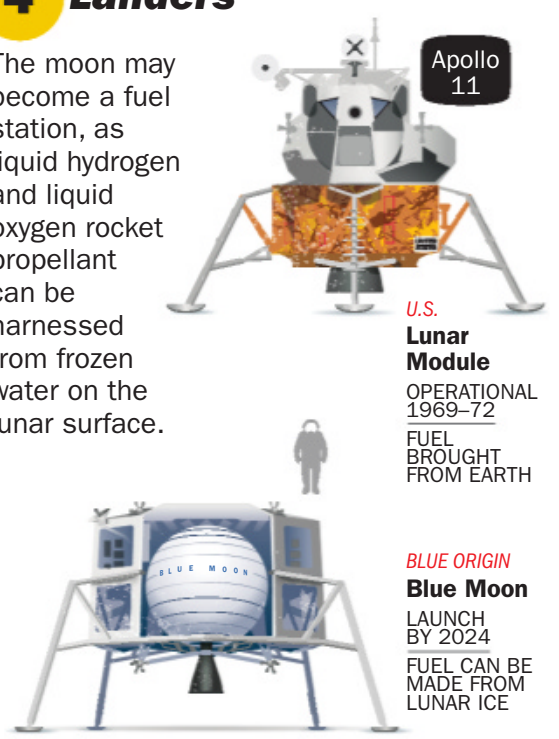


U.S.
Command Module
OPERATIONAL 1968–72
210-CU.-FT. LIVING AREA
CREW OF 3

U.S.
Orion
LAUNCH BY 2022
314-CU.-FT. LIVING AREA
CREW OF 4

4 Landers

The moon may become a fuel station, as liquid hydrogen and liquid oxygen rocket propellant can be harnessed from frozen water on the lunar surface.



U.S.
Lunar Module
OPERATIONAL 1969–72
FUEL BROUGHT FROM EARTH

BLUE ORIGIN
Blue Moon
LAUNCH BY 2024
FUEL CAN BE MADE FROM LUNAR ICE

SOURCES: NASA; BLUE ORIGIN; SPACEX; CHINA DAILY; SPACENEWS. NOTE: SLS, GATEWAY AND ORION LAUNCH DATES REFLECT MANNED MISSIONS. TIME GRAPHIC BY EMILY BARONE AND LON TWEETEN

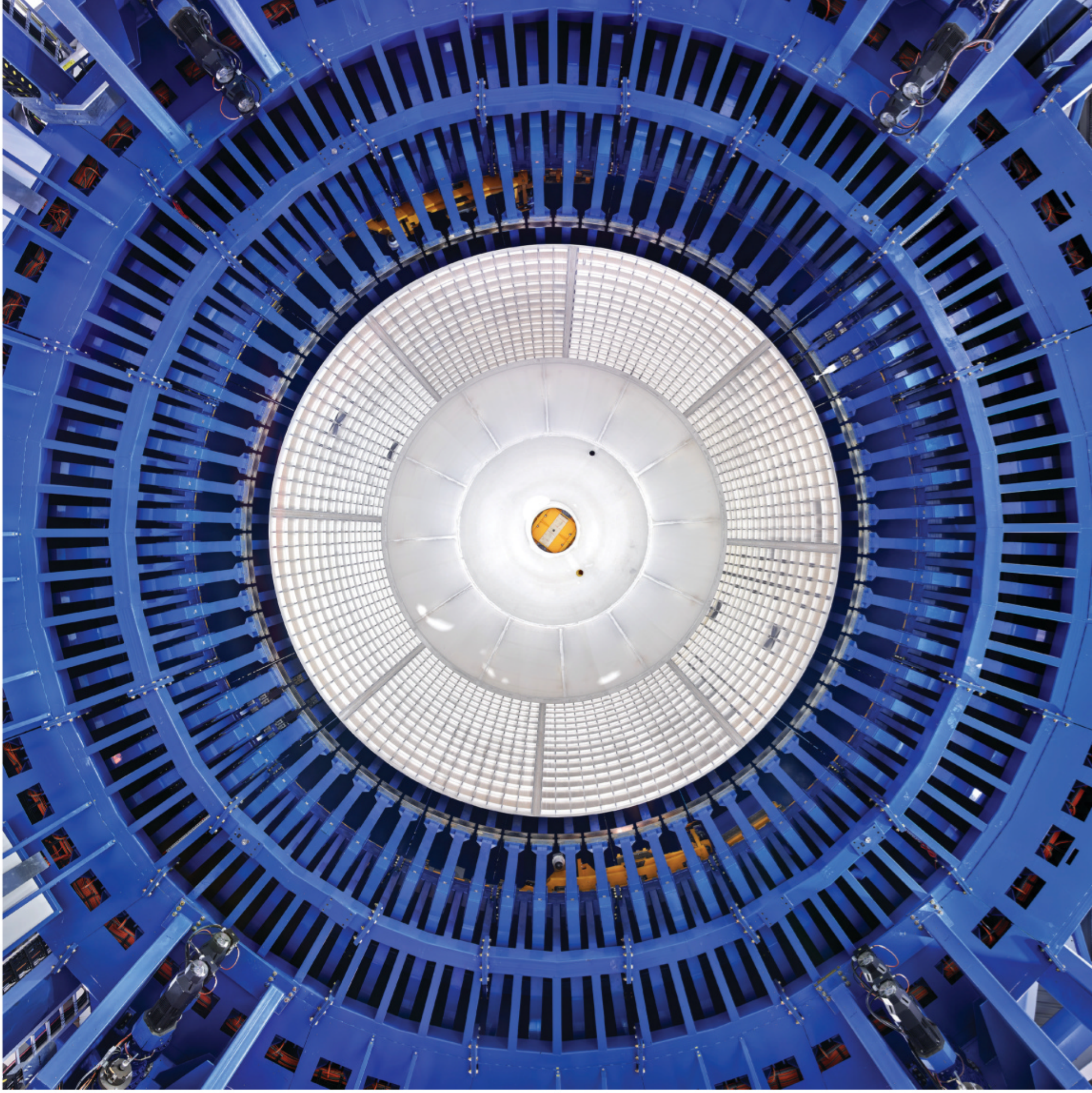
A test version of the liquid-oxygen tank that will power NASA's moon rocket, on a barge bound for Florida

has accelerated the timelines for SLS launches and the completion of the Orion crew vehicle—the modern analogue of the Apollo orbiter—as well as soliciting bids for a new lunar lander.

NASA is calling the latest lunar push the Artemis program, named after the mythical sister of Apollo. It's all, deliberately or not, an echo of President Kennedy's 1962 promise to have American astronauts on the surface of the moon by the end of the 1960s—a hard target and a fixed date that he challenged the country to meet. If Artemis succeeds, it will re-establish American primacy in space and prove that a riven country can once again do great things. If it fails, the U.S. will cede the moon, and its potential, for what could be decades to come.

THE CHINA NATIONAL Space Administration (CNSA) caught the world napping. The People's Republic didn't launch its first satellite until 1970 and for decades was a space backwater. But in 2003, that started changing when China launched its first taikonaut—the Chinese equivalent of the American astronaut and the Russian cosmonaut. China has now flown multiple crewed missions, conducted spacewalks, and built and launched a mini space station. The country has also flown four robotic lunar missions, most spectacularly earlier this year, with the landing of the Chang'e-4 base station and rover on the far side of the moon.

Beijing has been explicit about the



Part of a massive robotic welding tool NASA uses to make pieces of its space rockets at its Louisiana facility

country's plans for a south-pole lunar base—Chang'e-4 landed within what would be the Antarctic Circle on Earth. The CNSA has not officially disclosed whether a future base would be crewed or robotic, but as recently as 2017, Xinhua, the official state news agency, reported that Yang Liwei—the country's first taikonaut—announced that China was indeed "making plans for a manned lunar landing." Yang is to China what Neil Armstrong is to the U.S. and Yuri Gagarin is to Russia, and if he were speaking out of turn, Beijing would surely not let so influential a voice go uncontradicted.

But some observers in the West are incredulous. "When we're dealing with the Chinese space program, the only thing we can rely on are the government's periodic white papers and the Party Congress reports," says Dean Cheng, senior research fellow for Chinese political and security affairs at the Heritage Foundation, a D.C. think tank. "Their last white paper, in 2016, did not mention a manned lunar program."

China also says nothing at all about its space expenditures—or at least nothing remotely believable. The figure most widely cited in the press for the annual CNSA budget is $8 billion, or about 40% of NASA's projected $20 billion. But most experts dismiss this figure as an almost laughable lowball. "[China's] space program is embedded in their military," says Cheng. "The defense-budget figure is generally cited as about $250 billion. It's

NASA workers assembling the core stage of the Space Launch System, the backbone of the moon rocket

a polite fiction." In truth, he argues, China likely spends vastly more on both defense and space, and its infrastructure shows it: "If they can sustain four different launch sites and two state-run [space-related] corporations with 90,000 employees, we should just pack it in if they're doing it on $8 billion."

NASA, by comparison, gets by on relative pan scrapings. The agency's funding peaked in 1966, at just over $5.9 billion, the equivalent of $47 billion in 2019 dollars—more than twice what NASA gets today. After Pence announced the 2024 target for a return to the moon, the Trump Administration requested an additional $1.6 billion outlay, a figure not yet approved by Congress. Even if it were, it would still be well short of the $5 billion annual supplement many insiders believe is needed to make a 2024 moon landing happen. But the public buy-in for such a funding commitment just isn't there. "We could fly more often with more funding if the nation wanted to fly more often," says Orion program manager Mark Kirasich.

If China has a lead in finance and government commitment, however, by all appearances it's far behind the U.S. in rocketry know-how. Getting to the moon begins with the problem of figuring out a way to get very heavy machines to move very fast. The Apollo era's orbiter and lunar lander together weighed about 96,500 lb. That required building the massive Saturn 5 rocket, a leviathan that stood 363 ft. tall and generated a thrust of 7.6 million lb. For the more ambitious missions of the 21st century, NASA is designing the SLS to generate 8.8 million lb. of thrust. The additional muscle is key to getting the permanent infrastructure of the Artemis program off the ground. The plan is first to launch a mini space station, known as Gateway, into a near-lunar orbit. Crews of four astronauts would then fly an Orion out to Gateway, dock with it and take a lander down to the surface.

"This time when we go to the moon … we're going to go sustainably," says NASA administrator Jim Bridenstine. "We're going to learn how to live and work on another world so that we can eventually go to Mars." Initially, Gateway will make the Artemis missions more difficult and expensive than the Apollo missions, but in the long run it may be as affordable or cheaper. That's because Orion is reusable. The lunar lander would be as well—at least partly. Like the original Apollo lunar module, the new version will be a

two-part vehicle—a descent and ascent stage stacked one on the other. They land on the surface together, and when it's time to leave, the ascent stage blasts off with the crew, leaving the descent half behind. That ascent stage could then be used again.

Like the International Space Station, Gateway will be expandable, with multiple docking ports for international or private partners to attach modules to conduct experiments and stage lunar landings. Gateway will fly what's known as a near-rectilinear halo orbit, a series of elliptical circuits that can be adjusted with a relative puff of propellant, opening all parts of the moon to landing and exploration. Want to land at the south pole? Nudge your orbit one way. Want to land in the north? Nudge it the other. The Apollo spacecraft were locked in tight equatorial orbits, limiting potential landing areas.

First, though, NASA needs its rocket, and the SLS has been in start-stop development since 2005, with flat funding leading to repeatedly missed deadlines. Earlier this year, the Government Accountability Office issued a report finding that the SLS, the Orion and related systems have cost about $16 billion so far, some $1.8 billion more than was planned, largely thanks to delays. Now, however, the space agency insists the SLS is almost ready, and has an ambitious schedule, with the first crewed mission for around the moon planned for 2023.

Musk has moved more quickly still. The SpaceX Dragon, he says, may be ready to take a crew of astronauts to the ISS within the next six months. And though SpaceX's biggest rocket, the Falcon Heavy, does not have the propulsive power of the SLS, at more than 5 million lb. of thrust, it's the most powerful currently flying. In late June, SpaceX announced that as early as 2021, it will launch the Falcon Super Heavy rocket—with 10.8 million lb. of thrust—topped by a stainless steel, 180-ft. orbiter called Starship, with room for 100 passengers. That's 17 times the size of the Orion, which has room for four to six astronauts. It's the Super Heavy, not the existing Falcons, Musk believes, that will get humans past the "flags-and-footprints" model of the Apollo era and toward a more permanent presence on the moon and, later, Mars.

"We could sort of do a repeat of Apollo 11, a few small missions [with the Falcon Heavy], but the remake's never as good as the original," he says. Musk has already sold a handful of round-trip tickets to the moon aboard a future Starship, to Japanese fashion billionaire Yusaku Maezawa.

While Musk makes no secret at all of his plans, Bezos and Blue Origin's are, at the moment, more of a mystery. The

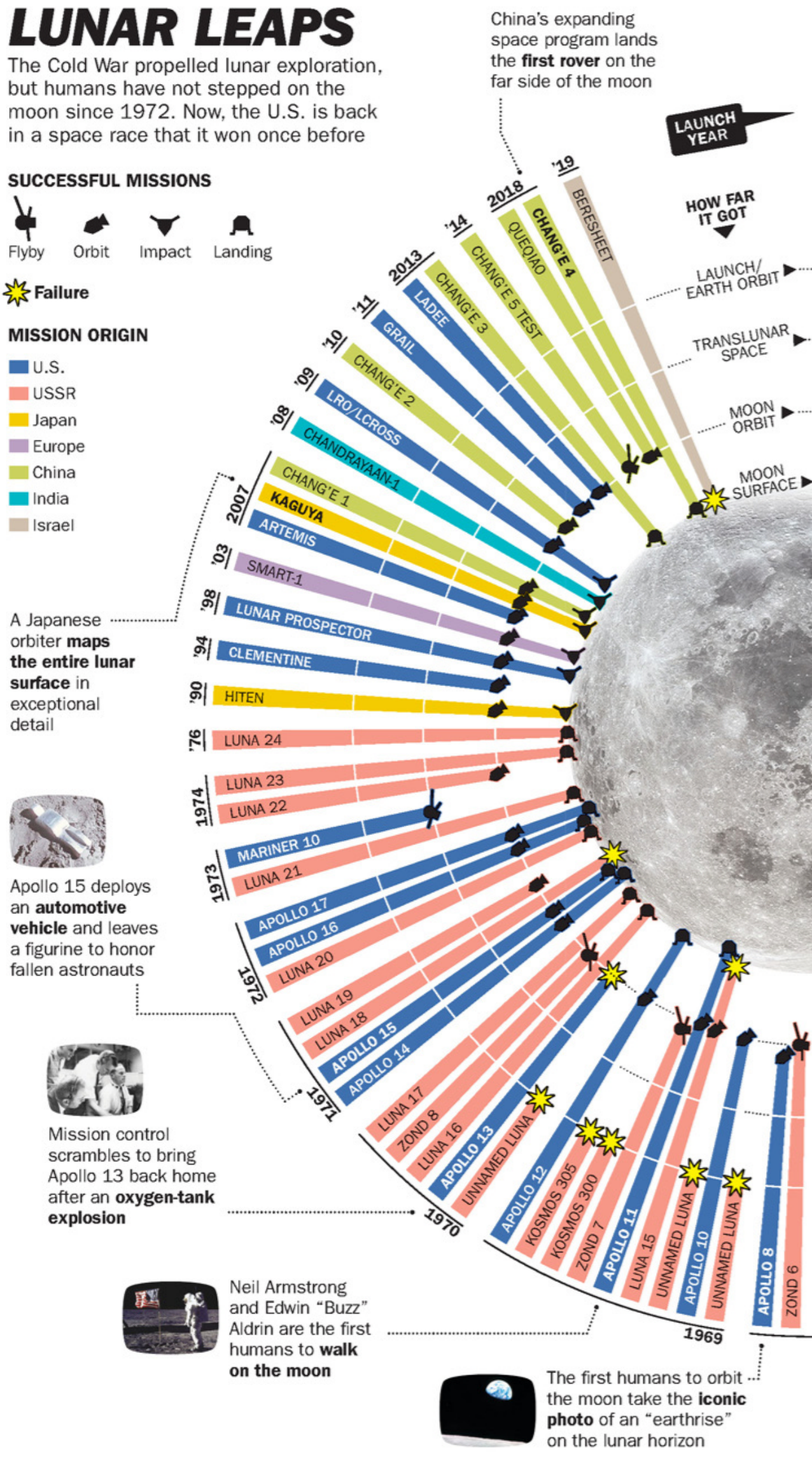
company's main building and factory in Kent, Wash., could just as easily be one of Bezos' Amazon fulfillment centers—though it's not without a certain wit. There is a planter in the lobby that, on closer examination, turns out to be an engine bell used on an actual rocket; a huge model of the U.S.S. *Enterprise* just off the factory floor; and a spacecraft door from the *Battlestar Galactica* set propped up on display like a huge piece of sculptural art.

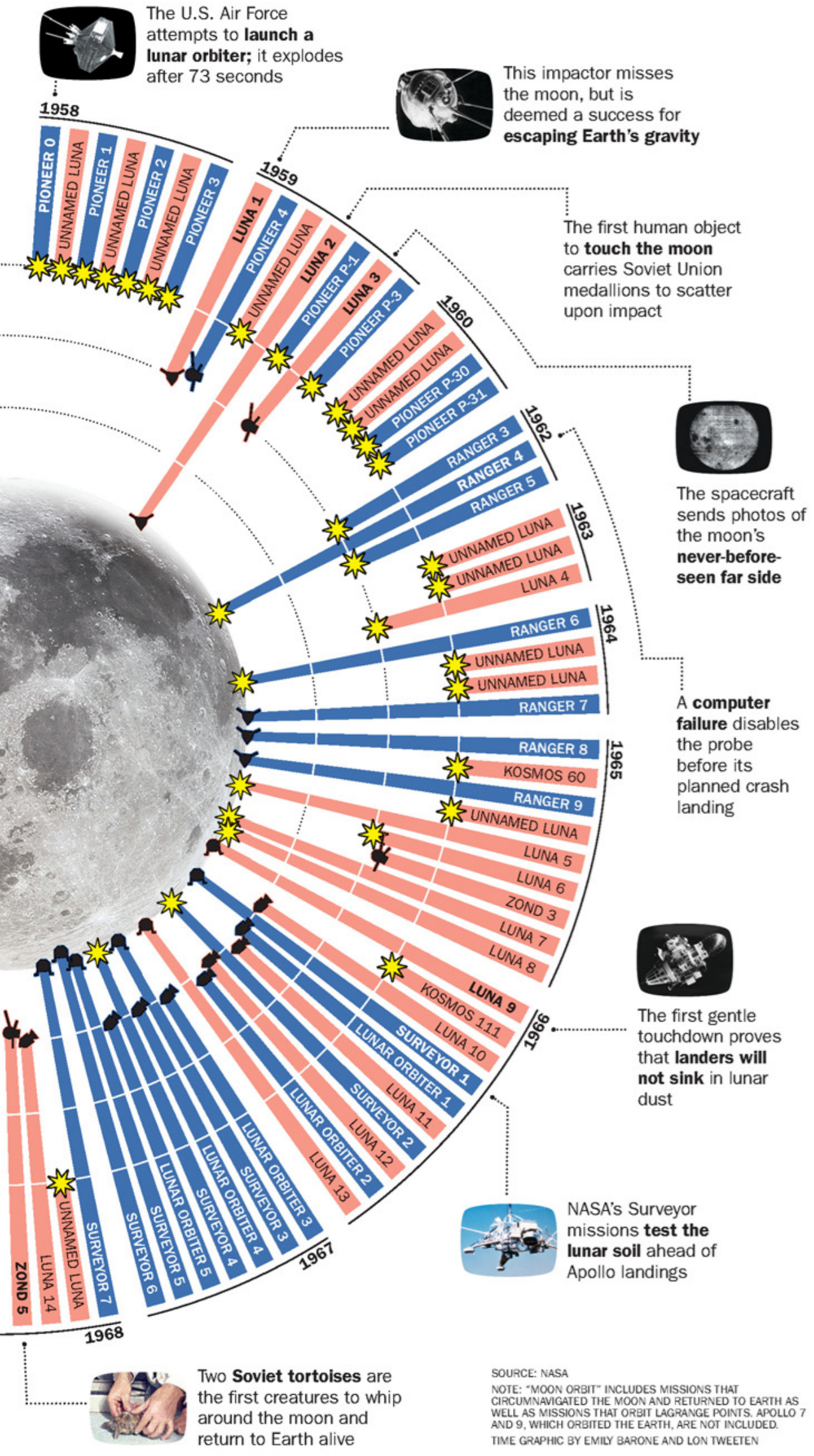
With its Amazon parentage, Blue Origin is not running short of funding anytime soon, but space programs are exceedingly expensive, with burn rates of billions before making any of that money back on paying customers, and there are only so many Prime shipments that can pay the freight. So at this point, says CEO Bob Smith, "there's no question that our job at Blue at this phase of its life is to be a self-sustaining business." The company's primary goal is to become a launch-service provider, like SpaceX, and then to start flying paying customers to space.

Blue Origin's New Shepard rocket—named, like most of Blue's vehicles, after U.S. space heroes, in this case Al Shepard, the first American in space—is fully reusable, designed to take payloads and people to suborbital space, for several minutes of zero G. That may seem like small-bore stuff: limited science and a vanity vacation for people with the money to afford it. But all of the hardware being developed for New Shepard is also intended for use on the much larger, soon-to-be-flying New Glenn rocket (after John, the first American to orbit Earth), the eventual New Armstrong (after Neil, the first person on the moon) and, most significantly, for Blue Moon, the company's future lunar lander.

NASA has solicited bids for lunar landers from multiple companies for its Artemis program, but there's no doubt that Blue Origin has a huge head start. "We don't know what everyone else has until they actually give all their proposals out," says Smith. "But we've been working on it for a while. We've gotten very good interactions with NASA … about what our thoughts are in terms of how we would go back to the moon by 2024."

AS FOR CHINA, whatever its goal, the country's crewed deep-space ambitions rely heavily on a new version of its





SOURCE: NASA

NOTE: "MOON ORBIT" INCLUDES MISSIONS THAT CIRCUMNAVIGATED THE MOON AND RETURNED TO EARTH AS WELL AS MISSIONS THAT ORBIT LAGRANGE POINTS. APOLLO 7 AND 9, WHICH ORBITED THE EARTH, ARE NOT INCLUDED.

TIME GRAPHIC BY EMILY BARONE AND LON TWEETEN

CLOCKWISE FROM TOP: PIONEER 0, LUNA 9, APOLLO 8, APOLLO 15, MOON: NASA (5); LUNA 1: JPL/NASA; LUNA 3: USSR/NASA; SURVEYOR 1: SSPL/GETTY IMAGES; ZOND 5: RSC ENERGIA; APOLLO 11: NASA/AFP/GETTY IMAGES; APOLLO 13: BETTMANN ARCHIVE/GETTY IMAGES

Long March rocket series, called Long March 5. It has been poised to take a robot probe to and from the moon at the end of this year, and another mission to Mars in 2020. However, early development efforts haven't gone smoothly. A 2016 test flight of the rocket more or less succeeded, with only a few trajectory problems on the way to orbit. But a 2017 launch failed, with the payload never reaching space. And a test planned for July of this year was postponed—a failure made public by European Space Agency satellite images, published online, showing the ships carrying the rocket idling at port well after they were supposed to have been en route.

"This is really the first time the Chinese have had a significant slip in their space program," says Cheng. "Sometimes they've had to stretch definitions or goals, [but] they haven't had programmatic misses like the Long March 5." And Long March 5 isn't even the rocket that would take taikonauts to the moon. It's a development phase intended to lead to the more powerful Long March 9. If China can't get the 5 off the ground, it surely isn't getting its bigger brother to fly.

There are also some questions about whether China's moon plans are actually a tactical misdirection, a way to play the public relations game while focusing on less flashy but more practical research and security projects in Earth orbit. "China certainly isn't racing the U.S. to the moon or anywhere else in space," says Gregory Kulacki, the China project manager of the Union of Concerned Scientists, a U.S.-based science-advocacy nonprofit. "You can't win a race you already lost 50 years ago."

Of course, there doesn't have to be a race at all, and international cooperation often works far better than competition. The U.S. has 15 partner nations working on the International Space Station. Russia, the European Space Agency, Japan and Canada have all contributed modules, and astronauts from 18 countries have flown aboard. With mounting tensions between the U.S. and Russia, space-station collaboration has been an effective pressure-release valve, especially when crews have to face problems together.

In 2015, a suspected ammonia leak in the American portion of the station required astronauts to hunker down in the Russian segment until the all-clear was

sounded. Retired astronaut Terry Virts, who was aboard at the time, recalls that Dmitry Rogozin, then the Deputy Prime Minister in charge of defense and space industries, who had been involved in a heated exchange with D.C. over the invasion of Crimea, promptly radioed the station. "'American colleagues,'" Virts recalls him saying, "'you can stay as long as you want. We are going to work on this together.'"

In a world facing borderless threats like climate change and emerging diseases, that kind of cooperation will be increasingly important, and space is a good way to build trust. Collaboration between the American and Chinese space programs, however, is for now effectively prohibited by a 2011 spending-bill clause known as the Wolf Amendment, out of concern for technology transfers that could compromise national security. Technically, NASA could cooperate with China on civil projects that have no military applications, but practically, there is too much dual use in any space technology ever to clear that bar. And a space race with China, rather than a space partnership, has political utility in the U.S., in the same way the competition with the Soviet Union did 50 years ago. "[Former NASA administrator] Mike Griffin, Elon Musk and other U.S. space personalities routinely play on U.S. anxieties about China to get Congress to fork over more money," says Kulacki. "Pence seems to be using the same playbook."

Ultimately, playbooks and politics are—or at least ought to be—minor matters in the far larger mission to make human beings what they briefly were half a century ago: a species of two worlds. Michael Collins, command-module pilot for Apollo 11, remembers being especially struck by a refrain he heard over and over when he and the rest of the crew were on a world tour following the mission. "I thought that when we went someplace they'd say, 'Well, congratulations. You Americans finally did it,'" he recalled in a recent interview. "And instead of that, unanimously the reaction was, 'We did it. We humans finally left this planet.'" ◻

INTERVIEW

Frances 'Poppy' Northcutt The boundary-breaking engineer talks sexism at NASA, Apollo 11 nostalgia and why it's time to return to the moon

You were the first woman to hold an operational-support role at NASA's Mission Control Center in Houston. What did the job entail? I started [in 1965] as a "computress," number crunching. What a weird title. Not only do they think I'm a computer, but they think I'm a gendered computer. I was made a member of the technical staff about a year later. During the Apollo 11 mission, I worked on trans-Earth injection—return-to-Earth maneuvers.

Since that doesn't come into play until the return trip, were you at work during the moon landing? No. I felt it was more important to be rested to do my job. If there are too many people around, it can be a distraction.

Northcutt at work for NASA in Houston in the late 1960s

Were you treated differently from your colleagues because of your gender? During Apollo 8, people would be watching me. I would hear chatter about looking at what's on channel whatever [on our internal camera system]. Finally, at one point, I turned on that channel, and there was a camera just on me.

What did you do? I just went, "O.K. Now I know." There was a lot of sexism [at work], but less than what most women experienced.

You're now president of the National Organization for Women in Texas. How did your work at NASA relate to your joining the women's movement? I became more conscious partly because of the attention I was getting as the first and only woman in my role in the Mission Control Center. It increased my awareness of how limited women's opportunities were. It was almost 1970, we're at the brink of going to the moon, and we still don't have more women? I should have been the 100th.

Should we go back to the moon? We should. It was a giant mistake to have stopped. We didn't fly all of the [planned] Apollo missions. We've never explored different ways to orbit the moon. It's like exploring Earth's equator, never getting into the northern or southern latitudes. That would not represent a complete exploration.

You've been involved in lots of anniversary reminiscence for Apollo 11, like the PBS documentary *Chasing the Moon*. How do you feel about the commemorations? I had no idea there'd be this much attention to it. [In] '68 and '69, there was a lot of political protest, distrust in government. We have that today as well. The space program was a bright spot in that environment. Maybe that's why there's nostalgia for a great achievement like Apollo 11. Do you see us doing any great achievement right now? I don't. —OLIVIA B. WAXMAN

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HERE ON EARTH

The little-known story behind the Apollo 11 party pictures taken for TIME in 1969

BY OLIVIA B. WAXMAN

PHOTOGRAPHS BY DAVID BURNETT FOR TIME

TO PHOTOGRAPH A MOON MISSION, THE OBVIOUS direction to point your camera would be up. But David Burnett, a 22-year-old photographer who was based out of TIME's Miami bureau, instead zoomed in on the ordinary Americans who camped out to watch the Apollo 11 astronauts lift off for the moon on July 16, 1969, from the Kennedy Space Center in Florida.

A few of his pictures appeared in the July 25, 1969, issue, accompanying the cover story on the moon landing, but the vast majority of the photos he took that day—of revelers parked on the side of the highway near the Indian River in Titusville, Fla., cooking over fires and playing folk music on guitars—were not published. Now, 50 years later, several of those images are making their first appearance in the pages of TIME. "It was the most unorganized organized event I think I've ever been to," Burnett recalls.

Looking back from the selfie era, Burnett is most struck by how many people were not bothering to photograph the liftoff. Some had cameras, but many used their hands instead to shield their eyes from the summer sun. In that motion, the photographer saw a kind of "salute to the mission," he says. "It was a Woodstock kind of moment, very emblematic of the times, the end of the '60s. People were hopeful, and the rocket took everyone's hopes with it."

Two of the people who filled out that scene

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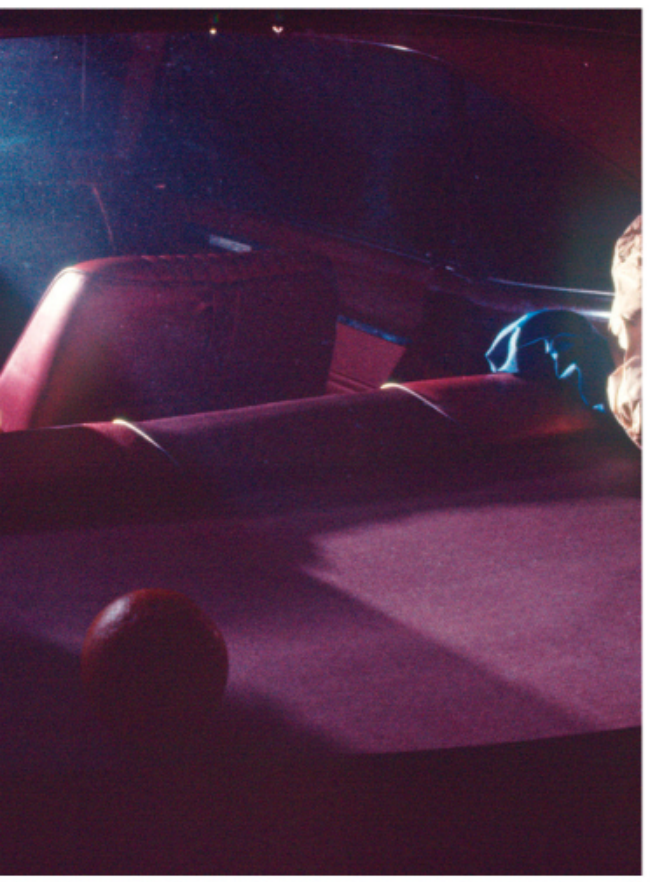


were Lillah and Stephen Robb, then 30 and 28. Stephen was off for the summer from his teaching job, so they drove their family to Florida from Oakland, Calif., in their Ford Club Wagon. Friends in Boca Raton babysat so the couple could arrive early the day before, get a good parking spot and camp out overnight. (The least fun part? The long bathroom lines.) Lillah recalls befriending a couple from Mesa, Ariz., and watching a portable TV with them before going to sleep at around 11 p.m. The next morning, at 9:32, the 363-ft.-tall Saturn 5 rocket took off. "I know that I cried," she says.

In the first picture of this story, the Robbs are the standing couple in the light blue and green-plaid shirts. Decades would pass before they learned that their skyward gazes had been preserved by Burnett, and the three just met for the first time at the July 11 opening of an exhibit of Burnett's photographs of the space tourists on display at the gallery at the Leica store in San Francisco, which is on view through Oct. 12.

In the intervening years, before they knew that the photo existed, Lillah Robb could turn to another source for a definitive record of that day. She'd kept a diary. "It was a beautiful orange flame as it went up and up, burning a hole in the cloud it went through," she wrote. "People clapped wildly and yelled at a couple of points. It really was hard to believe, but not to be forgotten." ◻

Scenes of civilians hoping for a good look at the launch. When TIME ran Burnett's photos in 1969, the magazine noted that "nearly 1,000,000 earthlings" came to "give Apollo 11 a lusty, shoulder-to-shoulder send-off"

CORY BOOKER IS HOLDING OUT FOR HIS MOMENT

His campaign seems stalled. But the Senator says he's right where he wants to be

BY LISSANDRA VILLA/CEDAR RAPIDS, IOWA

IT'S A SUNDAY AFTERNOON IN JUNE, more than an hour before the largest gathering of 2020 Democratic candidates in Iowa to date, and Cory Booker is getting mobbed on the streets of Cedar Rapids. Reaching over a low wall of signs spelling out his name, the New Jersey Senator hugs supporters and shakes their hands. Sunlight bounces off his bald head. He jumps into the bed of a pickup truck and takes the microphone, roaring over the fans cheering him on, telling them it's this kind of organization that will win the Democratic presidential nomination.

Booker makes his way down a sidewalk chalked with supportive messages, crosses the street and walks into a DoubleTree hotel, where he'll soon be the first of 19 candidates to take the stage for the Iowa Democratic Party's Hall of Fame event. All of them are hoping to say something in their allotted five minutes that will resonate with Iowans—or, better yet, have a viral moment that gives their campaign a spark.

Booker greets supporters in Cedar Rapids before the Iowa Democratic Party's Hall of Fame event on June 9

PHOTOGRAPHS BY DANNY WILCOX FRAZIER—VII FOR TIME

2020
CORY
2020

Booker needs one. Months into the race, he remains mired in the middle of the pack, drawing 3% or less in most national and state polls. He has won fewer headlines than many rivals. And while he's pulling in enough money—$4.5 million in the second fundraising quarter—he lags several millions behind the top tier there too.

The Senator is sanguine about where he stands. "I don't want to be breaking away in the polls right now," he tells TIME. "The metrics that I pay attention to are really on the kind of organizations we're building on the ground, the kind of response voters are having to your message." He believes national momentum is still built little by little, voter by voter, town hall by town hall. So he shakes more hands. Takes more pictures. Gives more hugs.

It's a time-tested strategy. What's not clear is whether it's the right one for the 2020 Democratic primary. Booker, 50, is competing for attention, money and staff with more than 20 other candidates, some of whom, like South Bend, Ind., Mayor Pete Buttigieg, have already had a Moment that propelled them past Booker. Other buzzed-about Senators making their first presidential runs, like Kamala Harris of California and Elizabeth Warren of Massachusetts, have broken out and risen toward the top of the field.

Booker, on the other hand, seems stagnant. He entered the race with a compelling biography, a reputation of wokeness and a message of unity. He's a well-connected Senator, a former mayor and a charismatic speaker who even dates a famous actor, Rosario Dawson. But there's no laboratory, no secret formula, no focus group that can guarantee those traditional assets will help in today's presidential politics. In some ways, the predictions that Booker would be a formidable contender for the nomination have come to seem like dated conventional wisdom from the era before Donald Trump's surprise victory in the 2016 election.

You don't need to know much beyond Newton's third law of motion to understand why Trump changed the game for 2020 Democrats too: the President's actions on the right have spurred a multitude of equal reactions on the left. The base is angry, the pressure to beat Trump is high, and no candidate has managed to unify the party's factions. Candidates are trying in different ways, from Joe Biden's emphasis on experience to Warren's policy wonkery to Andrew Yang's outsider pitch.

Booker is working from a throwback playbook. He's nabbing local endorsements, he's knocking on doors, and he's touring early states in RVs. As a result, his campaign is emerging as a test of whether the tried-and-true methods of presidential politics can prevail in 2020. "The opportunity is there for Senator Booker no matter the metrics," says Scott Mulhauser, a Democratic strategist. "But there is a collective set of second guessing after 2016."

ON A CLEAR, HOT SATURDAY in June, I rode with Booker in the back of a van as he made his way across Iowa in search of votes, a cooler rattling around behind us and aides in the seats ahead of us. The Senator had a packed agenda, and everything was a little behind schedule, but Booker was full of energy.

As we pulled into Iowa City, I asked if Booker got carsick and he said no, though he'd had a stomach bug while on the trail. "To have a stomach virus and have to get up and go in front of events, when your stomach is telling you you would rather be praying to the porcelain urn, took a level of grit," he said, joking. A turn more serious, he added, "I've got reservoirs of strength when I need them."

Booker, a 6-ft. 3-in. former Stanford tight end, can certainly handle the physical demands of the campaign. His decision to run wasn't shocking either; Democrats have been talking about his political promise almost as far back as Stanford, where he was senior class president. Booker studied at Oxford as a Rhodes scholar, then went to Yale Law School. Many of his peers went on to high-powered firms. Booker, who grew up in the well-to-do, predominantly white New Jersey town called Harrington Park, decided to move to a low-income, minority neighborhood in Newark in 1996.

He started off providing low-income families with legal services, but by age 29 he was elected a member of the city council, drawing notice for doing things like going on a 10-day hunger strike while living in a tent to draw attention to local issues like crime. In 2002, Booker ran for mayor against a longtime incumbent in a grueling race that became an Academy Award–nominated documentary feature, *Street Fight*. Booker lost but had a star turn in defeat. In 2006, Booker tried again, and this time he won.

As mayor, Booker became a household name. He did things like run into a neighbor's burning house to save her, and shoveled streets during a snowstorm after constituents reached out on Twitter. He helped secure a $100 million donation for Newark's education system from Facebook's Mark Zuckerberg, although the venture was ultimately unsuccessful, part of a mixed policy record critics say has been obscured by his shiny personal brand.

In 2013, Booker won a special election to the Senate, where he has built a platform as a member of the Judiciary Committee. He often works across the aisle and helped shepherd the criminal-justice reform bill that was among the most significant pieces of bipartisan legislation to pass in the last Congress. But much of his work in the Senate has been viewed through the prism of his presidential aspirations. Some colleagues considered him a showboat.

Some of the policy problems Booker tried to combat in Newark and on Capitol Hill have formed the cornerstone of his presidential platform. Among his policy promises are sweeping gun legislation that would require gun owners to get licenses; eliminating sentencing disparities between crack and powder cocaine; and a proposed White House Office of Reproductive Freedom. In the coming weeks, a campaign adviser says, Booker is planning to announce a new plan to ameliorate environmental damage from causes like lead pipes, unsafe drinking water and proximity to Superfund sites, which "disproportionately affects poor communities and communities of color."

As we rode through Iowa, I asked about his path forward. It begins, Booker says, in this first caucus state, where his organization is consistently mentioned by unaffiliated Democratic operatives as one of the best in Iowa, on par with Warren's. Booker has rolled out an Iowa Steering Committee to showcase several local endorsements, and he often calls in to house parties when not on the ground himself.

Booker prays with pastor Damian Miguel Epps, left, Linn County supervisor Stacey Walker, and campaign aide Rashan Colbert, far right, on June 9

"They're finding unique ways to find a personal touch," says Iowa Democratic strategist Matt Paul.

It's also true that Booker has room to grow his support. Many Democratic voters say they genuinely like Booker, who's skilled at retail politics. He nerds out with fans about being a Trekkie, snaps selfies and films clips saying hi to a family member who couldn't be there. At the Capital City Pride festival in Des Moines, he took an HIV test as press impatiently waited outside the trailer. At a service at Cedar Rapids' Mount Zion Missionary Baptist Church the morning of the Hall of Fame event, he gave his personal cell number to a recent high school graduate who had led a class walkout after two teens died in gun violence. These are things Booker does without thinking twice about them; many presidential candidates wouldn't think to do them at all.

And yet support for Booker hasn't solidified into the coalition he needs to be competitive. Many voters say he's on their short list, yet there's always a But. But Warren has a plan. But Bernie Sanders is my guy. But Biden is more electable. "He's probably in the top five right now," Pete Easton, a 33-year-old website designer from Davenport, says of Booker. "It's just hard to commit."

BOOKER BELIEVES he's still introducing himself to the electorate. He told me that after a recent speech in California, a voter came up to him and said, "I didn't know you were black." He presented it as evidence that the campaign is still in its opening innings. "We are building, building, building to win in Iowa, win in New Hampshire, win in Nevada and South Carolina," he says. "And I'm very confident I'm going to be the nominee of the party."

Yet even after a solid first presidential debate, he remains a rounding error in the polls. Perhaps Booker's biggest moment has been calling out Biden for the former Vice President's past willingness to work with segregationist lawmakers. Booker thought enough of the exchange to fundraise off it, but it did little to lift his campaign. Harris, in contrast, got a significant boost from attacking Biden on the debate stage for his past opposition to federally mandated school busing.

Booker's plan is to peak at the end of the year—not too early, not too late. The polls are going to change a lot between now and then, he says.

By luck of the draw, Booker ended up speaking first at the Hall of Fame event. That meant he would be setting the tone for the day, giving him an opportunity to stand out. As he took the stage to Bill Withers' "Lovely Day," his supporters stood on the far side of the convention hall holding lighted signs.

He gave a perfectly fine speech, touching on mass incarceration, abortion, health care and the need for workers to earn a living wage. He told the audience that beating Trump is the bare minimum of what the nation must do. "Donald Trump wants this election to be about him, on his terms and his turf. That's how he wins. We win when we rise," he said. "We will lift up our voices, we will raise our sights, we will win this election, and America, we will rise."

It was an abbreviated version of his stump speech, and it did little to set Booker apart from his Democratic rivals. He wrapped up before the Oscars-like music had to be played to shoo him off the stage. His moment would have to wait for another day. ☐

THE
SU

R V I V O R

Sara Teristi near her home in Raleigh, N.C.

PHOTOGRAPH BY IRINA ROZOVSKY FOR TIME

Olympic gymnastics doctor Larry Nassar molested hundreds of athletes throughout his career. Now the woman who may have been his first victim reveals how a domineering coach created a climate of fear that enabled sexual abuse

By Abigail Pesta

Sara Teristi saw the making of a monster.

She watched a man transform from doctor to predator, starting decades ago when he gained access to a gym full of little girls. She was one of those girls. She may have been his very first target.

She first met Larry Nassar—the most prolific known sex criminal in American sports history—at a gym in Michigan in late 1988. She was a young gymnast in a vulnerable state, she says, having been emotionally trampled by her hard-driving coach, John Geddert, a man who made her feel worthless. Nassar, who was volunteering as team doctor, zoomed in on her right away.

Now in her 40s, Sara tells me her story in a quiet courtyard of an art museum near her home in Raleigh, N.C. She is sharing her experience publicly for the first time, much of it recently pieced together after repressing the memories for decades, and she does not want to tell this tale in her house, around her two young sons. She remembers how Geddert created a culture of fear at the gym—shoving her, berating her, mocking her body—and how she lost her sense of self. She recalls that he watched while Nassar sexually abused her.

Today, she wears a metal knee brace from old gymnastics injuries. Physical pain is a part of her everyday life. Then there are the psychological scars. "People don't understand how many broken girls it takes to produce an elite athlete," she says, delivering the haunting words with the perfect posture of a gymnast. "A coach can easily go through 300 girls, or more."

Sara has detailed the events in this story, piece by piece, to two police departments in Michigan, starting after Nassar's sentencing in 2018, and has provided TIME with those reports. She is also participating in a mass tort suit against Nassar, Geddert and other individuals and institutions. Attorneys for Geddert did not respond to requests for comment on the allegations in this story. An attorney for Nassar said the former doctor is not doing interviews.

Nassar and Geddert worked together for nearly three decades at gyms in Michigan, rising to the top of the sport as Olympic doctor and coach. Geddert led the U.S. women's team to win gold at the 2012 Olympics. All the while, Nassar abused hundreds of young women and girls while pretending to treat them. He is now behind bars, where he will spend the rest of his life. Dozens of officials have been ousted or charged with crimes in the case.

Geddert was suspended by USA Gymnastics, the governing body for the sport, in January 2018. He promptly announced his retirement, saying in a letter to parents that the suspension was based on false allegations. Michigan police opened an investigation into unspecified complaints against him; the state attorney general took over the case this year amid increasing pressure from gymnasts and their families. They have accused him of mentally and physically abusive coaching and of helping to enable Nassar's sexual abuse.

I spoke with a dozen former gymnasts—from across the decades—who said Geddert ran an extreme training regimen in which girls lost sight of their bodies, their boundaries, themselves. They told me he took advantage of their passion for the sport and the inherent trust that their parents placed in him—the man who could help them achieve their dreams. That unmooring of their fundamental identities created an environment for a predator like Nassar to harm gymnast after gymnast, unchecked.

COURTESY SARA TERISTI (2)

'People don't understand how many broken girls it takes to produce an elite athlete.'

GROWING UP IN THE TINY TOWN of Dimondale, Mich., Sara, whose last name was Faculak at the time, was an exuberant kid. She had a hard time sitting still, especially when her dad came home from work in his state-trooper uniform, looking for a little peace. And so, in September 1980, when she was 5 years old, her mother enrolled her in a gymnastics class, hoping she could burn off some energy there.

The class was part of a youth program at Michigan State University, in nearby East Lansing. Sara's mom drove her there in her powder blue Datsun 210, and Sara, with her auburn hair in braids like Laura Ingalls from *Little House on the Prairie,* bounded into the gym in her leotard. The sport made Sara more energetic, not less. She used her bed as a trampoline, bouncing so high she scraped her nose on the ceiling. She did handstands against the closet door, causing the dog to bark in confusion. Over the next few years, she moved up to an advanced group and began practicing alongside girls more than twice her age.

In 1984, when she was 10, her coach recommended that Sara try out for a prestigious club in Lansing called Great Lakes Gymnastics, where an ambitious coach in his late 20s, John Geddert, was gaining a reputation for training stellar athletes. Geddert, a former gymnast at Central Michigan University, had coached at a top club in Maryland, MarVaTeens Gymnastics, before returning to Michigan, where he grew up.

At high-level gymnastics clubs such as these, young athletes

From top: Teristi competes at a national invitational in 1987; Teristi's school portrait circa 1984, the year she started at Great Lakes Gymnastics

train to compete in state, national or international meets. They can get on track for a college scholarship. Or maybe, for a lucky few, the Olympics. Jordyn Wieber, who won team gold with the U.S. in 2012, grew up in a town just down the road from Dimondale. There is always the dream.

Sara wanted to go for it. She leaped and flipped her way through the tryouts, showing no fear. A few days later, she heard the news: she had been accepted. It was the happiest day of her young life.

AT GREAT LAKES GYMNASTICS, Sara entered a new world—a boot camp. She welcomed the challenge. She wanted to prove she could hack it, especially since her parents were investing in her training. She decided she would help repay them by getting a college scholarship one day.

She sought perfection in practice, hoping to impress the demanding Geddert. "He would throw clipboards at the girls if they messed up," she tells me. "He would call them worthless." Her first experience with his temper came when she was around 11, trying to do a roundoff–back handspring–back tuck. She took off poorly and landed on her head. "He was supposed to spot me," which she says could have prevented the fall. "But he was angry that I had started off wrong. He turned his back and walked away." She got up alone, her face rug burned and throbbing. Instead of being mad at her coach, Sara was mad at herself. Geddert blamed the girls for their injuries, accusing them of not concentrating, so they learned to hide their pain and suppress their instinct to speak up when they felt they were treated unfairly.

TIME spoke with eight other gymnasts who trained at Great Lakes at the same time as Sara. Four of them said they experienced or witnessed Geddert berating girls, getting physical, or kicking and throwing items out of anger. Several of those women also said that he failed to spot them, as a punishment. The other four said they had neutral experiences at the gym.

Body weight was a stress point. The girls were weighed regularly at the gym. If they didn't "make weight," they were sentenced to run laps around the parking lot in their leotards. Sara remembers feeling humiliated, with cars driving by and honking, guys catcalling.

Sometimes Sara was ridiculed inside the gym as well. When she did handsprings, she had a hard time keeping her legs together because of a birth defect, she says. Geddert mocked her, making sexual jokes. "He said the boys would love me because I couldn't keep my legs together," she says. She felt mortified as he snickered, her face turning deep red.

Another time, Geddert got physical with her, she says, recalling a day when she didn't do well on the vault at practice. "As I was sprinting at full speed down the vault runway to try again, he shoved me, midsprint," she says. She went flying sideways, smashing into the uneven bars. Bruised, she got up to try again, feeling ashamed.

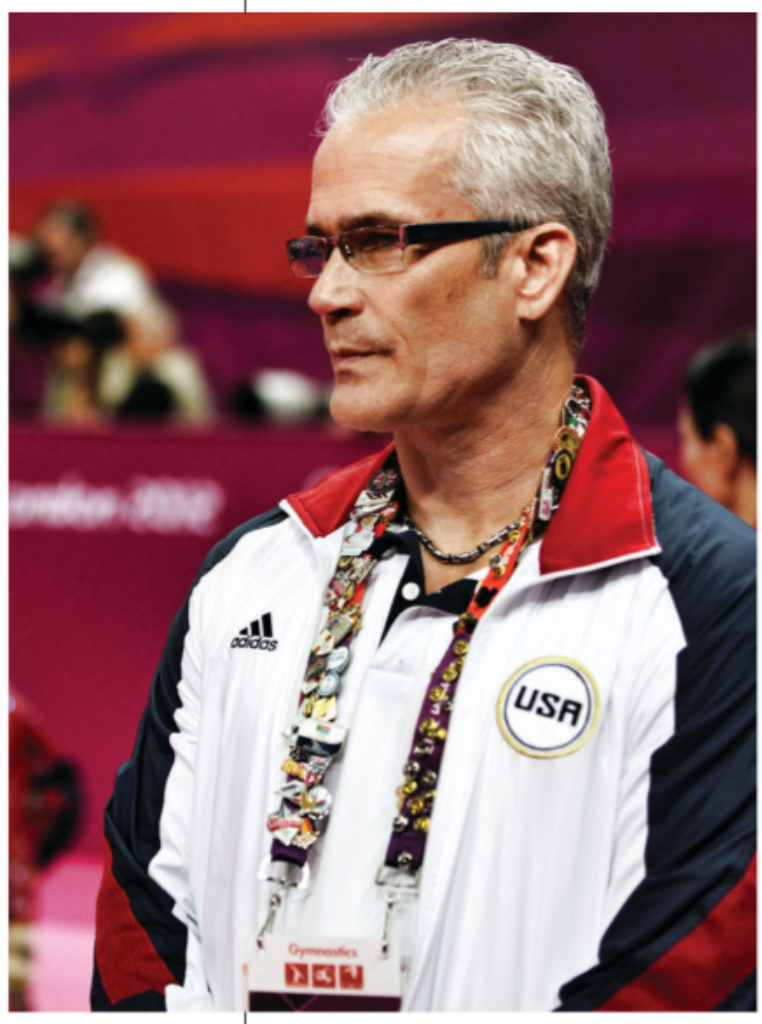
Sara didn't tell her parents about the rough treatment at the gym because as far as she knew, this was the norm if you wanted to be a top gymnast. Looking back, she describes the experience as "brainwashing." She was a young girl; Geddert was an adult man. He had all the power. She felt she could never do enough to earn his respect, so she became obsessed with trying to get it. "I was a perfectionist," she says. "And he was a drill sergeant." Her world became all about him. "I would've done anything to make John happy," she says. "Eventually, I saw him more than I saw my own parents."

The club moved to a new space: a rented gym in an old, shuttered school, the Walter French Junior High School, with no air-conditioning. "One day, after five or six hours of practice, the heat really got to me," she says. "I felt dizzy." She got permission from a coach to go to the bathroom, where she lay on the floor, hoping she wouldn't get in trouble for resting. She got busted immediately. "John came in and said, 'You're faking it. Get up!'" she says. "If he noticed you weren't in the

gym, he'd go searching for you in the bathroom." It's a habit he continued over time: three other former gymnasts told me he walked in on them in the locker room in more recent years. In retrospect, Sara says this is part of how she began to lose a sense of boundaries.

Then, around the time she was 12, she suffered an injury so extreme she could not possibly hide it from her coach.

While doing a dismount from a balance beam, she felt her body twisting badly. In that moment, she didn't think she needed to adjust herself; she thought she would be fine landing in a pit of foam blocks. Instead, she landed on her backside with such force, she says, that her feet flew up over the front of her head and her chin smashed into her sternum—actually breaking the bone. The shock and pain were so great, she could hardly move. Still, she tried to pull herself out of the pit. Geddert asked what was taking so long. "I said I was hurt; he said I was lying and to get up and do it again," she says. "I could feel my whole rib cage moving around in my chest. I could barely breathe." She tried to get back up on the beam. She collapsed instead.



From left: Geddert at the 2012 Olympics; Nassar in court in 2017

In the emergency room, she learned the awful news: her sternum had been broken in two places. But Sara was determined to return to the gym as soon as her doctors would allow. Her parents urged her to quit the sport, but she persuaded them to let her continue. They didn't want to end her dreams, so they reluctantly agreed.

Six months later, Sara went back to the gym—thrilled to be there. But during practice, everything felt physically out of whack. Geddert noticed. When she landed on her hands and knees after a vault, she says he sat on her, pinning her down. "He was sitting on my back, riding me in a sexual way," she says. "He said, 'Ooh, baby, you like it like that!' "

She tried valiantly to get back to form, but it wasn't happening quickly, and she felt lost. She knew she was fading in her coach's eyes. "I wasn't on the same trajectory that I once was," she says. "He was disappointed in me. I could feel it."

Geddert, meanwhile, was gaining in national prominence. He had a number of high-level gymnasts now. He wanted Olympians.

Then one day, Larry Nassar walked in the door.

ON HIS FIRST DAY at Great Lakes Gymnastics, Nassar stood awkwardly as Geddert introduced him to the girls, describing him as a student in medical school at Michigan State. It was late 1988, and Nassar had come to volunteer at the gym. Sara's first impression of the new doctor: "He was geeky, nerdy," she says. "He had this *Revenge of the Nerds* laugh, and we all giggled about that."

Nassar was building a résumé working with gymnasts. He had served as an athletic trainer for the U.S. National Team and had volunteered at both the Pan American Games and the Olympic trials. "He actively sought out situations where he could touch little girls all day," says James White, a Lansing attorney who represents Sara and other survivors.

Sara, 14 at the time, was still striving for a full comeback from her snapped sternum, pushing herself hard. One day, while practicing on the uneven bars, she was doing a release move, letting go of the high bar to grab the low bar, when she missed the low bar and slammed into it from behind, smacking her back. A fiery pain shot through her upper body. When Geddert found out, he kicked a bucket in anger, she recalls. "Then he yelled, 'Go see Larry!' "

Nassar examined Sara in the back room, concluding that she had dislocated several ribs. Then he iced her chest and sent her to tell Geddert she was injured. Her coach brushed her off, she says, so she continued training. She didn't take time off, didn't go to the hospital. She did not dare complain. Years later, she learned that at least one of the ribs had actually been broken at the time. "You develop a high threshold for pain," she explains. Still, she was only human. A few days after injuring her ribs, she tried to bench-press, but couldn't lift the bar all the way and let it slam down. "John got mad and asked what was wrong," she says. "I told him it hurt. Then he said, 'If you're gonna be that much of a wimp, then get out of my gym!' So I sucked it up and finished my sets."

She began seeing Nassar regularly. He would massage her chest with ice that had been frozen into little paper cups. At first, he left her leotard in place for this process. But soon, he began moving her leotard down. First he moved the straps down over her shoulders. Then he moved her bra straps down. Later he pushed the leotard and bra down low on her chest, until her nipples were exposed. Today, Sara believes he was testing to see how much he could get away with. At the time, she thought he must have a reason for doing what he did. Like many kids, she had been taught to trust doctors.

GEDDERT: MARC SEROTA—AP; NASSAR: PAUL SANCYA—AP

Nassar, emboldened, went a step further. "I remember the first time he touched my nipples," she says. "Usually, after he iced my chest, he would dab away any excess water with a paper towel. But this time he took the paper towel and wiped my nipples, even though they weren't wet. I thought, 'Why is he doing that—I'm not wet there.' Then I felt his finger touch my nipples. He massaged them and pinched them."

Then things got even more strange. As she lay there, "frozen," she says, Nassar suddenly got angry and ordered her to leave the room. "He said, 'You have to ice your own chest from now on.'" Sara didn't know what sparked the mood swing. "I was so confused," she says, "I thought I had done something wrong."

She wonders now if he panicked after going too far with her. Perhaps he pulled back to compose himself after losing control.

After that odd day, she didn't see him for a couple of weeks. Then one day, he invited her back. "This time, he undressed me right away and went straight for my nipples," she says. "He wasn't testing the waters anymore."

The ice "treatment" with Nassar continued, she says, sometimes with Geddert in the room. As she lay on her back, topless, she says Geddert saw Nassar touch her nipples. "They would stand there and have a conversation right in front of me," she says. "John would joke about how small my 'tits' were. He said if I was lucky, they would get bigger." But she wasn't surprised by much of anything at this point. After all, Geddert walked in on the girls in the bathroom, she says. No boundaries, no privacy. Sara believes Geddert helped make her vulnerable to the abuse from Nassar, trampling her psyche to a point where she had lost her sense of self. "Your body didn't belong to you," she says. "You didn't get to make decisions about it."

TIME confirmed that Sara reported this abuse to a close family friend as well as the police in 2018. Like many survivors of childhood sexual abuse, she did not tell anyone at the time, because she did not recognize it as abuse. For Sara and many other Nassar survivors, it was not until after the former doctor's arrest and sentencing that they realized what had been done to them.

Sara says Geddert then took his taunting further. She had developed a lump on her chest where one of her ribs had reconnected badly, and he began calling it her "third boob," she says. He joked that her other two breasts needed to catch up to the size of the third.

"You're a kid—you laugh it off. I started calling it my third boob too," she says. "But deep down, it devastated me." Later, she says, Geddert started using Third Boob as her nickname.

As Sara's pain continued, her mother pressed her to quit. "I told her there was no way she could make me," Sara says. She had worked too hard to give up. So she persuaded her mom to let her seek medical help for pain management and keep going.

Nassar then began a new "treatment" with Sara, kneading her bare back, down to her rear, which was partially exposed, making her feel self-conscious. The procedure was painful, and she told him it hurt, assuming he would stop. But no. "He took his elbow and ground it into my back even harder," she says. She tells me she finds it interesting that many of his more recent victims have described Nassar as a nice guy. He was not nice to her. Sara believes that with her in those early days, he was always testing, learning, figuring out how far he could push it with his young patients.

He was also learning how to ingratiate himself with those who would enable his abuse, a practice that would lead him from treating gymnasts at Great Lakes to athletes at Michigan State University and USA Gymnastics. Sara believes she witnessed a defining moment in that process. One day during practice, she saw a gymnast get injured, and Nassar told Geddert that the girl should take a week off. "John got pissed and started throwing things," Sara says. "I remember Larry watching. And then, slowly, very methodically, he changed his mind and said, 'Actually, she doesn't need a week off.'" The coach stopped raging. He asked Nassar if he was sure. The answer: yes.

Sara thinks Nassar realized that the way to keep his access to the girls was to please Geddert. And the way to please Geddert was to clear the girls to keep training and competing while injured. "After that," she says, "Larry went along with whatever John wanted."

'He undressed me right away … He wasn't testing the waters anymore.'

BY THE TIME she was 16, Sara had developed a new injury: a hairline fracture in her tailbone from repetitive stress. The injury threatened her dream—and presented a new opportunity for Nassar.

Sara has a difficult time discussing what happened next, but thinks it's important to do so, she says, to help people understand how predators operate. She remembers lying facedown on a table in the back room of the gym, gripping the sides of the table in pain during a procedure, wanting it to stop. Nassar was penetrating her anally with his hands, without using gloves or medical lubricant. She recalls a musty smell in the room at times; in retrospect, she believes he was ejaculating while she lay there.

At the time, she didn't understand. Sexual abuse wasn't on

her radar. And neither was sex. She had never dated boys; there was no time for that, what with the demands of training and school. She knew only that the procedure was excruciating and that it felt endless. She didn't tell anyone because she trusted that her doctor was performing a medical treatment.

By this point, she says, any sense of personal boundaries at the gym was lost. She recalls how the girls would do the splits at practice, with Geddert measuring how close they could get to the floor, using a ruler or tape measure, to gauge their flexibility. While he measured her, she says he touched and rubbed her crotch through her leotard, smirking and saying he was trying to get a better measurement. Four of the former Great Lakes gymnasts TIME spoke with confirmed that Geddert routinely measured their splits manually. To Sara, it was all part of a world where her body was not her own.

Survivors of sexual abuse by Nassar stand during a Senate hearing in 2018

As she entered her senior year of high school, in 1991, Nassar's abuse escalated. He began taking her and other girls from the gym to his apartment, under the guise of either medical research or treatment. Two other former gymnasts told me he took them there as young girls during this time as well, recalling that he had them take baths—ice baths to ease their pain or hot baths to increase their flexibility, or so he said—then he penetrated them vaginally or anally with his bare hands.

Sara says the smell of potpourri—which he kept in a bowl on his toilet in his bathroom—has haunted her throughout her life.

SARA'S SENIOR YEAR would be her last in gymnastics.

On the day she said goodbye to Geddert, she drove to the gym in her 1978 Oldsmobile Cutlass, crying all the way. "I was trying to figure out if I was doing the right thing," she says. "I thought I was being weak." When she parked the car, her ribs throbbed in pain as she turned the steering wheel, and she knew she'd made the right call. She walked into the gym and told her coach she was done.

His response surprised her—he was kind, telling her she was welcome back anytime. Sara would puzzle over that mysterious final moment for years to come. Today she wonders, "Did he feel guilty for breaking me? Was he trying to keep me there for Larry, or to keep me quiet about what Larry did to me?"

In college, Sara suffered from anxiety and depression, and she tried to tell a campus counselor about her painful years at the gym—to no avail. "She interrupted me to ask if I was embellishing," Sara says. "She said no coach or doctor would be allowed to treat their athletes that way." Sara, in her emotionally fragile state, buried her childhood experience.

'Did he feel guilty for breaking me? Was he trying … to keep me quiet?'

More than two decades later, when her father alerted her to Nassar's arrest, Sara tried not to think about it. Busy raising her family in North Carolina at the time, she did not want to remember those dreadful years in gymnastics. She had long since put all of that away.

As much as Sara wanted to leave her past behind, however, she could not ignore the widening scandal in the news. In early 2018, when she saw more than 150 women stand up to give their victim-impact statements in court, the memories came crashing back. "I felt dizzy, like I would vomit," she says. Her brain fought with itself as she tried to accept that she had been sexually abused. An excruciatingly difficult year followed.

Today, she says she wrestles more with the psychological abuse of her coach than the sexual abuse of the doctor. She continues to blame herself for getting injured. It had been so thoroughly drilled into her head that injuries were her fault. She recalls the day she broke her sternum—that instant during the dismount when she didn't adjust to land better. When she crashed and snapped her sternum, it angered her coach and led her to the doctor, setting the abuse in motion. She recognizes that she was a child—exhausted, hungry, overheated. But still, she says, "I never should have let my body relax. You can never let up."

She is working to rewire her thinking. "My therapist tells me to talk to the girl inside me," she says. She is focusing on family, and on the long road to healing. Her fellow survivors are a source of camaraderie and support. Her hope is "to see justice served for John Geddert," she says. She believes she is getting stronger, gradually. "If I can handle this," she says, "there's not a whole lot I can't handle."

Pesta is a journalist whose investigative reporting has appeared in major publications worldwide. This article is adapted from her latest book, The Girls: An All-American Town, a Predatory Doctor, and the Untold Story of the Gymnasts Who Brought Him Down. *Copyright © 2019. Published by arrangement with Seal Press, an imprint of Hachette Book Group, Inc.*

ALEX WONG—GETTY IMAGES

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TimeOff

OUT OF AFRICA
Jon Favreau's photorealistic take on *The Lion King* is Disney's latest stab at reimagining a classic

INSIDE

ONCE GREAT, THE HANDMAID'S TALE *LOSES ITS WAY*

THE FAB FIVE OF QUEER EYE *RETURN TO MAKE MORE MAGIC*

HOW THE INTERNET HAS TRANSFORMED LANGUAGE

MOVIES

Disney keeps remaking itself. Is that so bad?

By Stephanie Zacharek

UNLESS YOU'RE 99, AND MAYBE EVEN THEN, your first big-screen experience is likely to have been a Disney movie. Disney productions—whether we're talking about *Snow White and the Seven Dwarfs* (1937), *The Computer Wore Tennis Shoes* (1969) or the empowerment juggernaut *Frozen* (2013)—have long been considered safe, wholesome choices for kids, pictures that parents can feel they don't need to vet in advance. Even I can attest to the potency of the Disney product. The first movie I saw in a theater, at roughly age 3, was *The Three Lives of Thomasina* (1964), about the adventures of an orange feline. I can say that with just one film, the Disney organization created a monster: I demanded more movies, and a cat.

When you're a big person, a movie seen in a theater is literally larger than life; when you're a little person, it can be like a new portal opening in the universe, overwhelming in the best way—or possibly the worst. Those experiences matter, and Disney knows the power—and the profit potential—of what's in its vaults, which helps explain the studio's ongoing strategy of remaking its most popular animated films, often in straight-out live-action versions. These revamps are appearing so rapidly, it's hard to keep up: two of them, Tim Burton's *Dumbo* and Guy Ritchie's *Aladdin,* have already appeared this year, with release dates barely two months apart. And now, with the smoke from Aladdin's lamp still lingering in the air, comes *The Lion King,* Jon Favreau's photorealistic adaptation of the 1994 animated megahit, a film beloved by many, if not by me. In fact, I can think of few movies that are as emotionally punishing in the guise of being charming or life-affirming. Its moments of terror are protracted and bleak, and play freely on a child's worst fear: that of losing a parent. The movie's most horrific sequences are followed, often too abruptly, by attempts at jaunty good humor; the movie's tonal shifts are jagged as shards of glass.

HOW YOU FEEL about Favreau's interpretation of *The Lion King,* a blend of live-action filmmaking techniques, virtual-reality methods and computer-generated imagery, will depend largely on how you feel about the original. The story, even with a gently updated script by Jeff Nathanson, is roughly the same: a lion cub named Simba idolizes his father Mufasa (voiced, as in the original, by James Earl Jones), knowing that one day he'll follow in those paternal pawprints to become king of Pride Rock. But Mufasa's jealous and vengeful brother, Scar (Chiwetel Ejiofor), hopes to wipe out both generations of lion royalty at once so he can become king. He succeeds in killing Mufasa, and this new *Lion King* re-creates with hyperrealistic clarity the most enduring—and also the most egregiously manipulative—image from the first movie: that of young Simba nudging his father's corpse, desperate to awaken him.

If you've seen the original, you know how the rest of it goes. The chief difference here is the look of this new *Lion King,* polished and handsome but also curiously sterile. Giraffes run hither and thither on spotty, spindly legs; zebra herds dash by, a stripy blur. This *Lion King* took a lot of effort to make, and every bead of sweat shows. The lions and other animals sport highly realistic fur and feathers; their mouths move and words spill out, in a manner that's either wonderful or dumb depending on your tolerance for animals' spouting lessons about the circle of life and other oversimplified nuggets of food-chain wisdom. The film certainly boasts some star power: as an adult, Simba is voiced by Donald Glover, and Nala, the lioness friend who draws him from his exile and persuades him to return to Pride Rock, is voiced by a characteristically assertive Beyoncé—and she sounds like she means business.

'It feels like we're restoring a classic historic architectural landmark.'

JON FAVREAU,
to *Entertainment Weekly,*
on the challenges of updating *The Lion King*

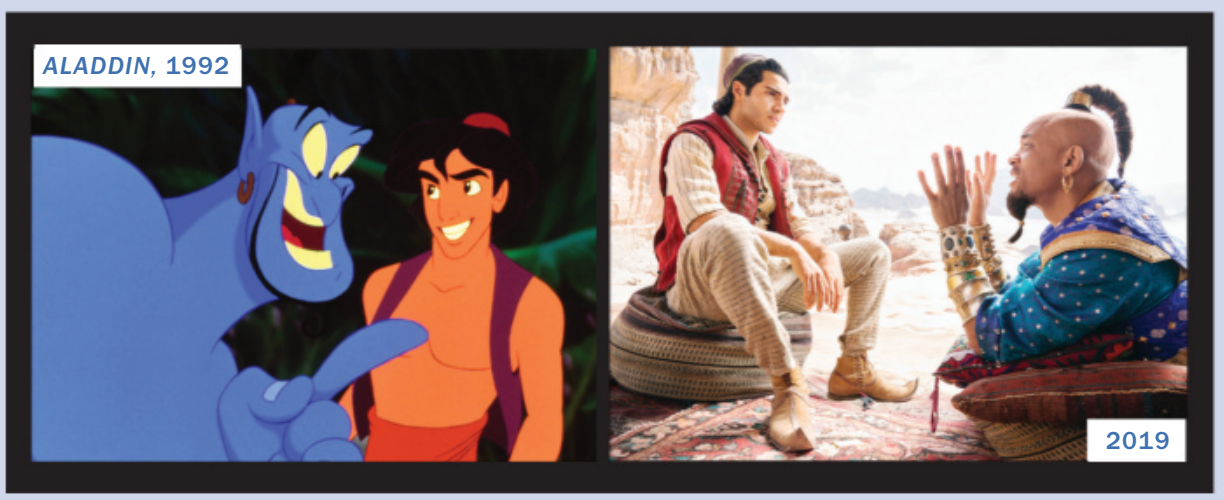
ALL OF THESE DISNEY REMAKES are designed to stoke the nostalgia of boomers, Gen X-ers and millennials, if not 99-year-olds, and many of the moviegoers who grew up with *The Lion King,* in particular, now have young kids of their own. Little wonder the studio is seeing big dollar signs in these lion eyes. But it's dangerous to think of any major entertainment conglomerate—even, or maybe particularly, the aggressively family-oriented Disney—as our friend. The first thing Disney wants from moviegoers is our money, and between its phalanx of Marvel Studios blockbusters, its lucrative Pixar and *Star Wars* releases, and its recent purchase of 20th Century Fox, it's poised to grab more and more of it.

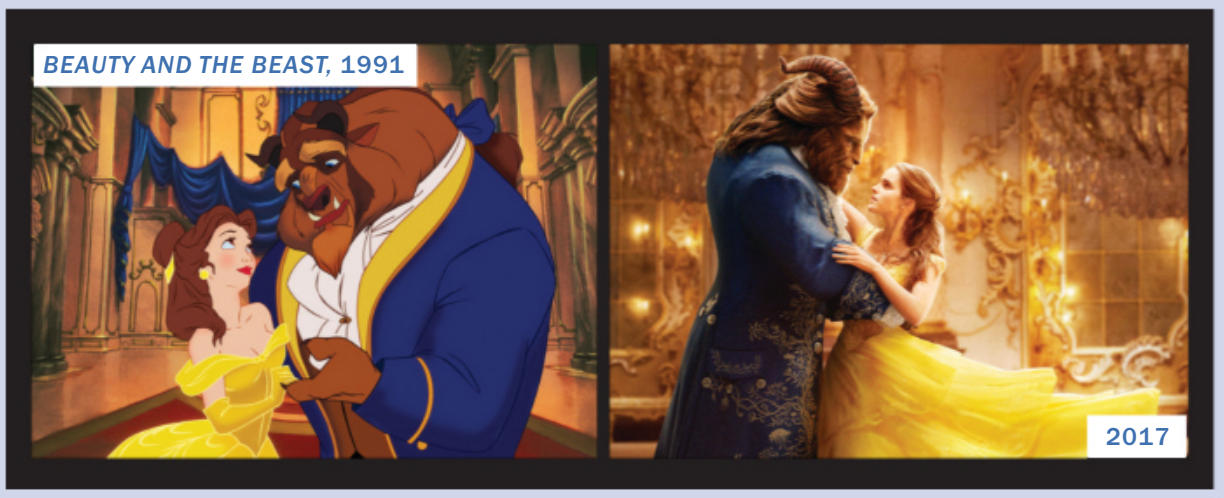
Yet to dismiss the Disney remakes, specifically, as retreads driven by greed and hubris is to overlook a significant truth: the studio has shown some imaginativeness in matching directors with material, and in some cases, the results have been wonderful. Disney has perhaps trusted Tim Burton—once a genius, now a purveyor of brassy vulgarity—with too many of these projects, like the showy, headache-inducing

OPENING PAGE: DISNEY; OPPOSITE PAGE: EVERETT (8)

Disney, then and now

The House of Mouse has been hard at work remaking its beloved animated classics—with decidedly mixed results:





Alice in Wonderland (2010), and *Dumbo* was just more of the same. But Bill Condon's 2017 *Beauty and the Beast,* starring Emma Watson as the bookish Belle, is an exuberant delight, a love song to the go-for-broke musicals of the 1960s, like Carol Reed's *Oliver!* and the Rodgers and Hammerstein made-for-TV *Cinderella.* Wild and vivid and gorgeous to look at, *Beauty and the Beast* was and is like nothing else being made today—and yet it emerged from a studio we generally consider deeply conventional.

THERE ARE OTHER EXAMPLES, like Kenneth Branagh's bold, rococo 2015 *Cinderella,* starring a winsome Lily James as the future princess-in-blue. (John Waters, the king of so-bad-it's-good filmmaking, put it on his 10 Best Movies list that year, and he's a tough crowd.) Who knows what some of the future Disney remake projects might look like? Next up is Charlie Bean's *Lady and the Tramp,* slated for November, and in 2020, Niki Caro's warrior-woman adventure *Mulan* will bring a cast of Chinese actors, including Liu Yifei, Donnie Yen and the great Jet Li, to a worldwide audience, including many Americans who may be seeing them for the first time.

Let's not forget, either, that before *The Lion King,* Favreau worked some clever magic with another remake: his 2016 *Jungle Book,* in which computer-generated animals talk, sing, saunter, slink and slither around a live-action boy, Neel Sethi's Mowgli, has spirit and verve to spare. In fact, the loose-limbed joyousness of *The Jungle Book* may help put the flaws of *The Lion King* in perspective: the latter movie, so steeped in faux-serious themes like the importance of duty, is the kind of material that has to be approached with reverence. Maybe Favreau just couldn't have any fun with it.

And that's the danger of trying to do inventive work for a very serious studio with big money riding on each and every project. Photorealistic lion hairs, no matter how many millions of them you've generated, aren't by themselves going to get the job done. A filmmaker has to find ways to dance in the margins and get away with it. You can genuflect a little—as long as you keep some space clear for your own personal roar. ◻

Another day, another soul-crushing dystopian ritual

REVIEW

How *The Handmaid's Tale* fell from grace

By Judy Berman

THERE IS A COMMON MISPERCEPTION THAT HULU'S *THE Handmaid's Tale* ended its first season on the very last page of Margaret Atwood's novel, when the secret police loads Offred (Elisabeth Moss) into a van. But the book continues from there, with a crucial epilogue set at an academic conference 200 years in the future. A parody of precious academic discourse whose lightness is striking in the wake of Offred's harrowing narrative, Atwood's epilogue confirms that Gilead may have been a nightmare, but it wasn't the end of the world.

I'm dying for a full season of *The Handmaid's Tale* set at this conference, which I know is never going to happen. But after almost three seasons of a series that began as a revelation but has become a chore, Atwood's coda underlines how inert the show's structure is compared to that of the book. The time jump jarringly recontextualizes Gilead, offsetting the gloom of Offred's story. Hulu's version could accomplish something similar—or at least stop repeating itself—if it weren't so invested in maintaining a uniform tone, setting and cast of characters.

The show's second season certainly had its moments, from the increased attention to Yvonne Strahovski's selfish, conflicted Serena Joy to a glimpse of Gilead's place in global politics. For the most part, though, it just rehashed the misery of the debut season: women got raped, families got torn apart, lawbreakers got executed, the sins of powerful men went unpunished. A baffling finale in which June (Offred's real name) handed her baby to Canada-bound pal Emily (Alexis Bledel) but refused to escape without her older daughter may have been the last straw for many viewers.

The third season has brought even more grotesque community rituals, state-sanctioned violence, another big betrayal of womankind by Serena, more moments of weakness from the world's most dangerous Wife Guy, Commander Waterford (Joseph Fiennes). A generous description of what makes these new episodes different from their predecessors is that they briefly explore the backstories of mysterious characters like Aunt Lydia (Ann Dowd) and relocate June to the home of prickly, condescending but also clearly remorseful Gilead architect Joseph Lawrence (Bradley Whitford). The move puts her at the forefront of a resistance movement coordinated by his radical Marthas. But we've seen revolutions start and get squashed before on this show—as in the bombing of Waterford's new Red Center in the second season.

Instead of being a person, June is a quippy, unstoppable Feminist Badass

JUNE HAS BECOME exceptional to the point of arrogance, when her ordinariness was essential to Atwood's novel. At worst, her heroism reduces the show to a simplistic empowerment narrative or rape-revenge fantasy. June's frequent voice-overs—almost all of which reiterate the same mix of sadness, determination and profanity-laced rage—reinforce that tone. Instead of being a person, she's become a quippy, unstoppable Feminist Badass. I groaned at a luxurious shot of her this season, reclining by the pool with a cigarette and blowing smoke at the camera.

The best bits of Season 3 have shifted focus from June and the Waterfords. Lydia's recent flashback was intriguing, but also too little and too late. A bittersweet scene where Emily breaks down while reading a story to her son, and he gently picks up where she left off, suggests fresh emotional terrain to explore.

The Handmaid's Tale should've been a miniseries. But since it's hard to imagine Hulu canceling its flagship original, I'd love to see the writers make changes in future seasons. Why not spend a year with the refugees in Canada or the U.S. government in exile? How about a series of episode-length portraits of every kind of female character in Gilead? The show has spent three seasons building out an alternate world. What a shame it would be if it never developed the imagination or ambition to explore the place. □

THE HANDMAID'S TALE: HULU; QUEER EYE: CHRISTOPHER SMITH—NETFLIX; SOUTH SIDE: COMEDY CENTRAL

REVIEW

Fab 5, take four

Queer Eye has been outrunning its flawed premise since 2003. Though Bravo's original series coincided with an increasingly mainstream LGBT-rights movement, some viewers—even then—complained about the show's premise, which positioned gays as sassy helpers for straight men. The chances of Netflix's revival capturing the zeitgeist, in an era of marriage equality, sexual fluidity and *RuPaul's Drag Race,* seemed slim.

But then America met Karamo, Antoni, Tan, Bobby and especially Jonathan, a bubbly grooming expert with a heart of gold. This new Fab Five—and new makeover subjects of all identities—made *Queer Eye* work again. In these uncivil times, the show's appeal is in watching people with very little in common treat each other kindly.

Still, its fourth season, out July 19, raises the question of longevity. There are only so many "whole new you" story lines, and subjects' issues are getting repetitive: He's shy! She's too self-sacrificing!—though this season's visit to Jonathan's high school music teacher provides a poignant variation on the latter theme. And if I never hear another straight guy marvel aloud over how cool and weird it is to hang out with gay men, it'll be too soon. —*J.B.*

The cast, back again

Sergeant Turner (Russell), Simon (Sultan Salahuddin) and K (Young) dream and scheme

REVIEW

A comedy duo steps into the spotlight

EVEN IF YOU DON'T KNOW BASHIR Salahuddin or Diallo Riddle by name, the likelihood that these college friends turned writing partners have made you laugh is extremely high. As *Late Night with Jimmy Fallon* writers, they scripted viral "Slow Jam the News" segments. Riddle was a bright spot in Marlon Wayans' short-lived sitcom *Marlon.* And Salahuddin has been charming *GLOW* fans as Cherry Bang's sweet husband, Keith.

This summer, the duo seizes the spotlight as co-creators of two new series: Comedy Central's *South Side* and *Sherman's Showcase* on IFC. Each of these richly detailed comedies affectionately sends up the unique characters, tropes and injustices that define a specific corner of black culture. But that's where their similarities end.

Premiering on July 24, *South Side* is the more conventional of the two, with all the rapid-fire jokes and zany digressions of a Tina Fey joint. Set and shot in the working-class Chicago neighborhood of Englewood, it finds two hapless new community-college grads, Simon (Bashir's brother Sultan Salahuddin) and K (Kareme Young), locked out of their respective fields. Stuck doing repo for a rent-to-own store, the pals pursue such absurd side hustles as selling black-market Viagra at nursing homes. Their misadventures bring them into conflict with an amusing cast of locals, from checked-out lawyer Allen Gayle (Riddle) to Sergeant Turner (Chandra Russell), a happily crooked cop. (Salahuddin plays her partner Officer Goodnight, an otherwise straight arrow with a habit of handing out undeserved beatings.)

Sherman's Showcase, which debuts on July 31, is a stranger project, like *Documentary Now!* meets *Soul Train.* It's framed as a series of infomercials for a DVD compilation of a 40-year-old music variety show hosted by Salahuddin's shady Sherman. There are sharp musical parodies; spot-on period costumes; amusing impressions (Mary J. Blige, Lana Del Rey); and appearances by executive producer John Legend, Tiffany Haddish, Quincy Jones and more.

Though *Showcase* is more allusive and ambitious than *South Side,* both shows are funny. And Salahuddin and Riddle's distinctive characters are the clear highlights; even tiny roles pop. Something tells me they have hundreds more unforgettable singers, scammers and strivers in them, all clamoring for the screen time they deserve. —J.B.

NONFICTION

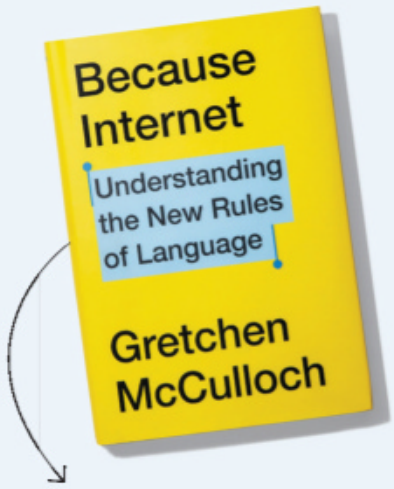
How to speak fluent Internet

By Katy Steinmetz

FOR MORE THAN 600 YEARS, ENGLISH speakers used *because* as a conjunction meaning "for the reason that," dutifully following it with a full clause of explanation (or at least the word *of*). Then, a few years ago, this old standby suddenly began bursting with new life, as people started using it to form terse, cheeky rationales in a manner that defied all grammatical decorum: How do you know climate change is real? "Because science." Why are you sleepy? "Because burrito." Academics went aflutter, debating whether *because* had evolved into a preposition and which types of nouns fit this newfangled construction. But there was little disagreement on the driving force behind the change.

The title of Gretchen McCulloch's new book, *Because Internet: Understanding the New Rules of Language*, is a homage to this kind of linguistic metamorphosis—evolution made possible by the ascendance of the web and the unprecedented explosion of informal writing that has come with it. Her aim is to explain how the Internet has shaped language, as billions of people have become authors and found ways to type out the flirtations (😘) and frustrations (aklefj;awkjfdsafjka!!!) and quotidian *blurgh*s that for centuries existed only as informal speech.

McCulloch is an Internet linguist (yes, that is a real job), and her book about Internet language is, fittingly, a mash-up drawn from academic and Internet cultures. She breaks down concepts like diglossia—an instance when two varieties of a language are spoken in the same community—as she casually deploys online speak like "meatspace" (the physical world, opposite to cyberspace). In some measure, *Because Internet* offers a history of the web, an introduction to linguistics and a survey of the most fascinating research from her field, including a study that took advantage of geotags on social media to show how new slang words spread from place to place. Her opus is also a well-researched retort to grumpy grammarians who think technology is turning kids into lazy, inarticulate drivelers. On the contrary, she argues, it's making us more creative in our writing than ever before.



A TAXONOMY OF INTERNET PEOPLE, ACCORDING TO MCCULLOCH

"Old Internet people" are techies who went online to socialize with strangers before the web had gone mainstream

"Full Internet people" got online circa the late '90s to connect with others they already knew from the physical world

"Semi Internet people" linked up around 2000, but primarily for work—they're less enthusiastic about socializing over the web

"Pre Internet people" are an older cohort who were compelled to get online by things like pictures of grandkids

"Post Internet people" take it for granted that the web is social, having no memory of life before it

***"Non Internet people"** boldly refuse to get online, despite the web's ubiquity

MCCULLOCH IS A SCHOLAR, pundit and podcaster who frequently appears in the media to explain whatever That New Thing on the Internet means. She is also a pillar of the online community known as Linguist Twitter. In a recent bit of research on that platform, she put up a poll, asking, "What does :P mean to you?" Of the more than 1,100 people who responded, 66% said the tongue-out emoticon was flirtatious or cutesy, 8% said it conveyed exasperation, and 20% said it checks both boxes. Some noted that they use it for other purposes, like acknowledging they've made a corny "dad joke." Such are the "exquisite layers of social nuance" that McCulloch demystifies throughout her book as she analyzes the linguistic impact of chat rooms, text messages, social networks and memes.

The formal, unemotional writing we were all taught in the classroom simply won't do in places designed for virtual mingling, McCulloch explains. And she breaks down the many ways we've managed to use keyboards to restore the dynamism of face-to-face interaction. For a start: We tap all caps when we feel LIKE SHOUTING. We utilize emojis when we need to gesture, replacing those extended hands and arched eyebrows that can crystallize the meaning of vague words. We use the abbreviation *lol* not just to mean "laughing out loud" but also to diffuse slightly awkward situations or to offer empathy. And we lengthen words to show just how much we feeeeeeeeel.

For those well versed in the ways of the web, *Because Internet* will offer insight into how we are, often unwittingly, signaling our identity through the language we use online each day. For those who aren't familiar with lolcats, the book can serve as something of a guide. The only audience McCulloch doesn't cater to are the gripers who believe English is a precious urn to be maintained rather than, as she puts it, a splendidly "living, moving" thing. ◻

FICTION

Trouble brews in Minnesota

Edith and Helen Calder haven't spoken in decades. The sisters' rift began after the death of their father, who left all the money from the family's farm to Helen so she could fulfill her dream of opening a brewery. In J. Ryan Stradal's *The Lager Queen of Minnesota,* Edith is left to fend for herself—a burden that intensifies when she becomes unexpectedly responsible for the care of her granddaughter.

In Stradal's follow-up to his best-selling debut, *Kitchens of the Great Midwest,* the Minnesota native's energetic prose once again captures the optimism of the heartland. *Lager Queen* follows the trajectories of both sisters at different moments: Helen, as a young adult in the 1950s and '60s, finding success in the brewery industry, and Edith, in her 60s in the 2000s, fighting to make ends meet. It is Diana, the latter's grandchild, who creates a bridge between the two narratives. As a teenager, she becomes interested in brewing and soon earns a place in the local industry, where she realizes she may have the power to reunite her fractured family.

Edith's resilience alone makes the novel worth reading. Despite the heaviness of her life, and the thread of grief that runs through it, she never succumbs to self-pity. And her infectious sense of hope doesn't just drive the story. It drives the reader, too, to take stock of what truly matters. —*A.G.*

LIPPMAN: LESLEY UNRUH; ILLUSTRATIONS BY KIM SIELBECK FOR TIME; BOOKS: KIM BUBELLO FOR TIME

FICTION

Unburying the lede

By Annabel Gutterman

LAURA LIPPMAN KNOWS HER WAY around Baltimore. Not only did the crime writer grow up in the city, but she also spent 12 years reporting for the Baltimore *Sun*. Her latest novel, a thriller set in 1960s Baltimore, is based on a real unsolved case in which a woman was found dead in a fountain. Lippman dedicated *Lady in the Lake* to the victims of the *Capital Gazette* shooting in Annapolis, Md., which occurred the day after she handed in the book to her publisher.

The novel is not only dedicated to local journalism; it's about journalism too. The story begins with Maddie Schwartz, a privileged white woman newly separated from her husband who helps police find the body of a missing 11-year-old girl. Maddie dreams of becoming a reporter and leverages the assist into a job at a paper, where she becomes obsessed with a different case: the discovery of Cleo Sherwood's body in a fountain.

Nobody seems to care about what happened to Cleo, a black woman in a city plagued, like the rest of the country, by racism. And Cleo's ghost, who narrates parts of the novel, doesn't want to be found. She is especially unappreciative of Maddie poking around in her world, one she knows the reporter can't understand. Cleo doubts Maddie's intentions: Does she really want to solve the mystery, or is she just trying to score a byline?

While the voice of Cleo's ghost is compelling, other narrators are less sharply articulated. Lippman includes more than a dozen vignettes about characters tangentially related to the central plot—an Orioles player, a columnist, a moviegoer—that weigh the story down. But the suspense picks up as Maddie pieces together what really happened to Cleo.

Though *Lady in the Lake* is a thriller, it's most gripping when it probes Maddie's evolving relationship with the city she's always lived in but is only now beginning to see clearly. Yet her reckoning with the injustices around her, further complicated by a secret relationship she starts with a black police officer, is only one layer of the story. The clarity of Cleo's voice, which directly addresses both Maddie and the reader, showcases her own complexities and interrogates the biases that threatened her very survival. It's Cleo whose words make the reader feel the intense grip prejudice has over 1960s Baltimore, and Cleo who makes it impossible to ignore how that ugly legacy lives on. □

Lippman's 23rd novel explores 1960s Baltimore

Meet the meatless

By Mahita Gajanan

BEEFLESS BURGERS AND FISH MADE OUT OF PLANTS ARE THE FUTURE, IF TECH COMPANIES LIKE Beyond Meat and Impossible Foods have their way. The California-based firms have focused on making meatless meat to answer growing concerns over the health and environmental impacts of eating animals—and it's working. In its first earnings report since going public in May, Beyond Meat reported a 215% year-over-year revenue increase, primarily from sales of its grocery-store offerings. Impossible Foods has made its way to at least 5,000 restaurants across the U.S. and now has plans to offer its products in supermarkets. Here's a rundown of the major players in this expanding sector of the food business.

How they stack up

IMPOSSIBLE FOODS	WHAT THEY MAKE RIGHT NOW	BEYOND MEAT
Burger patties, ground beef and sausage		Burger patties, ground beef, beef crumbles and sausage
Soy protein, coconut and sunflower oils, potato protein, yeast extract; the meaty texture and taste comes from heme, an iron-rich molecule found in blood	WHAT'S IN THEM	Pea-protein isolates, mung-bean protein, coconut oil and apple extract; beet juice is added for a meaty red hue
More than 5,000 restaurants across the U.S. and Asia, including chains like Burger King and White Castle	WHERE YOU CAN GET THEM	Grocery chains, including Kroger and Whole Foods, and restaurants like Del Taco, TGI Fridays and Carl's Jr.
Plant-based fish and seafood; Impossible plans to make meat substitutes for every animal product by 2035	PRODUCTS THEY ARE WORKING ON FOR THE FUTURE	Meatless poultry and more variations on meatless beef and pork
Claims 87% less water, 96% less land and 89% less greenhouse-gas emissions than a beef burger	ENVIRONMENTAL IMPACT	Claims 99% less water, 93% less land and 90% less greenhouse-gas emissions than a beef burger

THE OTHER COMPETITORS

THE NEWCOMERS:
The popularity of meat substitutes has opened the door for other companies to introduce products conceptually similar to those of Impossible Foods and Beyond Meat. Tyson Foods recently announced its own line of plant-based meat alternatives, including meatless chicken nuggets and burgers. Other emerging competitors are Before the Butcher, Moving Mountains, Rebellyous Foods (which offers meatless chicken) and Good Catch (which makes plant-based tuna).

THE CLASSICS:
Popular brands like Morningstar, Amy's Kitchen, Boca and Quorn have been around for a long time. These food manufacturers have typically not prioritized making their products taste like meat the way newer companies like Beyond and Impossible have. On the flip side, they might have some health advantages: nutritionists have cautioned against eating too much of the processed soy and potato proteins in Impossible burgers and the pea-protein isolates in Beyond burgers.

FROM LEFT: JASON HENRY—THE NEW YORK TIMES/REDUX; BEYOND BURGER

SWEET RAISINS

CRUNCHY BRAN FLAKES

PLOT TWIST

WE ADDED BANANA SLICES

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7 Questions

Richard Russo The Pulitzer Prize winner on his new novel *Chances Are…*, our nearness to war and the truth about destiny

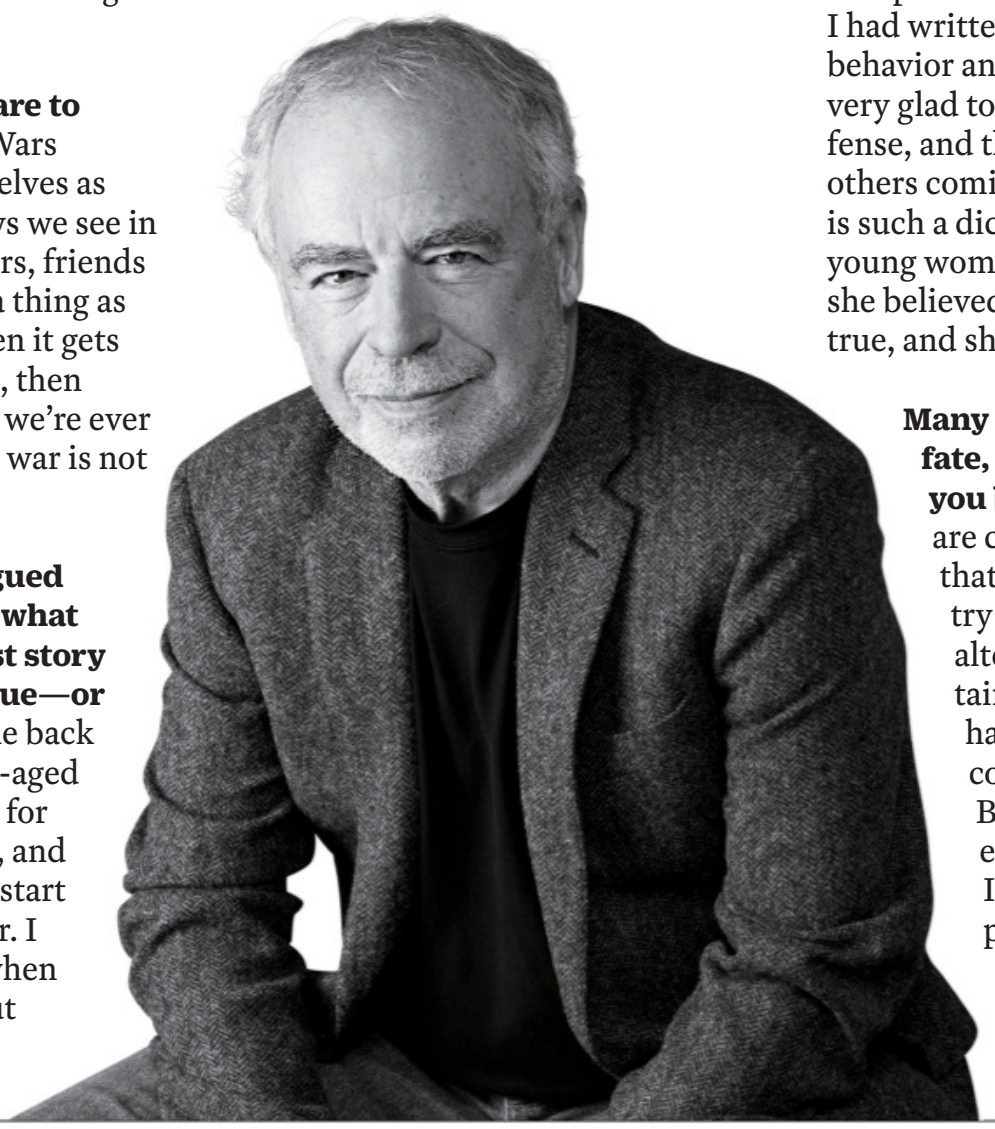
You often use your life to inspire your books. Are you in the three 66-year-old friends at the center of *Chances Are…*? My not wanting to go out too far on a limb, my worrying sometimes if I'm playing things too safe—all of that I off-loaded onto Lincoln. Teddy loves the life of the mind, but he knows that it can also stultify the heart. Mickey is just a kick-ass rocker. I had the same drive that Bruce Springsteen has, minus the talent.

The men look back on their memories of the Vietnam War draft lottery. What was that like for you? I remember vividly being with friends at the University of Arizona, all the terrible jokes and the sense of conviviality when it began, and how we all drifted away to call home. I gave Teddy my own number: 322. There are certain times when it's good to be smart and certain times when it's good to be industrious, but that night it was good to be lucky.

How close do you think we are to a repetition of that scene? Wars are what we know about ourselves as human beings. Whatever flaws we see in ourselves, and in our neighbors, friends and enemies, if there is such a thing as original sin, it's that. And when it gets written large in world leaders, then yeah, it's just hard to imagine we're ever going to live in a world where war is not right around the corner.

Teddy says, "It might be argued that doing to your children what was done to you is the oldest story in the world." How is that true—or not—for you? My father came back from the war almost a middle-aged man. He'd been taking orders for about as long as he wanted to, and he damn well wasn't going to start taking orders from my mother. I was just as scared as he was when it came time to be a father. But when they came home from school, when we sat down to dinner—my children were never going to wonder where I was.

"MY FIRST INSTINCT WHEN ANYBODY SAYS ANYTHING BAD ABOUT ME IS ALWAYS TO SAY, "GOD, IS THAT TRUE?"



ELENA SEIBERT

The theme of toxic masculinity runs through *Chances Are…*, and a character rants about the "We Don't Do Right by Girls" club. How does that resonate with you? My two daughters have found wonderful husbands. As a father, I just breathe a sigh of relief, because there's just a lot of bad men out there. Normally you'd say, all right, well, we don't have to worry about that anymore. But, of course, now I have a granddaughter. I'm still terrified.

A review of one of your novels once posed the question of whether you're a misogynist. What did you make of that? I have to admit, having been raised Catholic, my first instinct when anybody says anything bad about me is always to say, "God, is that true?" At that point in my career, it could be said I had written an awful lot about male behavior and misbehavior. But I was very glad to see people rallied to my defense, and there weren't an awful lot of others coming in and saying, "That guy is such a dick." I don't know who that young woman was, but I have no doubt she believed what she was saying was true, and she had every right to say it.

Many of your books deal with fate, the new one included. Do you believe in destiny? There are certain things that are fated, that no matter how hard we try are beyond our ability to alter or shape. There are certain things over which we do have agency. And then of course there is dumb luck. But suppose you put me in exactly the same place where I started, with the same parents, living on the same street, and you gave me 99 more tries. There would be 99 different outcomes.

—LUCY FELDMAN

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